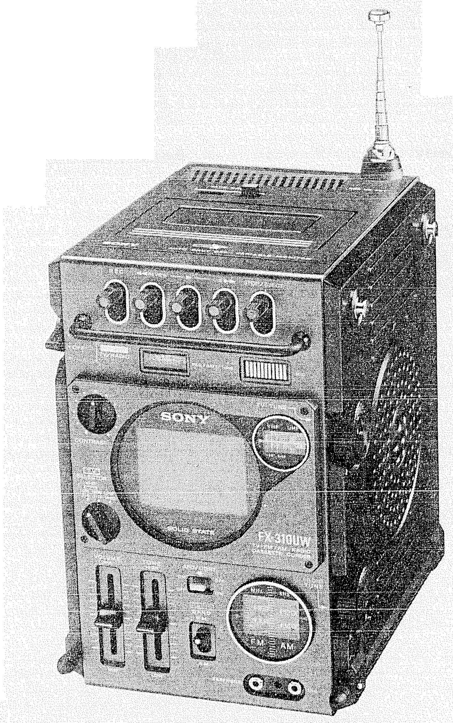
FX-310UW



TV-FM/AM
RECEIVER
CASSETTE-CORDER

SPECIFICATIONS

Television System: American TV standards
Picture Tube: 7.2cm, 3'' (measured diagonally), 50° deflection
Semiconductors: 49 transistors, and 39 diodes
Antennas: VHF, UHF, FM: Built-in telescopic antenna with external antenna terminal 75Ω unbalanced
AM: Built-in ferrite-rod antenna
Channel Coverage: VHF channels: 2–13
UHF channels: 14–83

Intermediate Frequencies: Picture i-f carrier: 45.75MHz
Sound i-f carrier: 41.25MHz
Sound System: 4.5MHz intercarrier
Output power: 1,800mW (max, at dc operation)
Speaker: 10cm (4 inches) dia, 8Ω
Automatic Controls: AFC (automatic frequency control)
Input: MIC (one mini jack)
Sensitivity: 0.2mV (−72dB)
for low impedance microphone

0 dB = 0.775 V

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND ⚠ MARK ON THE SHCEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SONY®

SERVICE MANUAL

Output:	EARPHONE (one mini jack) for 8Ω earphone or load impedance 10kΩ or higher
Anode Voltage:	5.2kV at 20μA beam current
Power Requirement:	120V ac, 50/60Hz, 9Vdc, six batteries size D (IEC Designation R20) 12V car battery with optional sony car battery cord DCC-16
Power Consumption:	9.5W ac
Dimensions:	Approx. 175(w) x 270(h) x 225(d) mm $6^{7}/_{8}$ (w) x $10^{5}/_{8}$ (h) x $8^{7}/_{8}$ (d) inches including projecting parts and controls
Net Weight:	Approx. 3.9kg (8lb 10 oz) without batteries

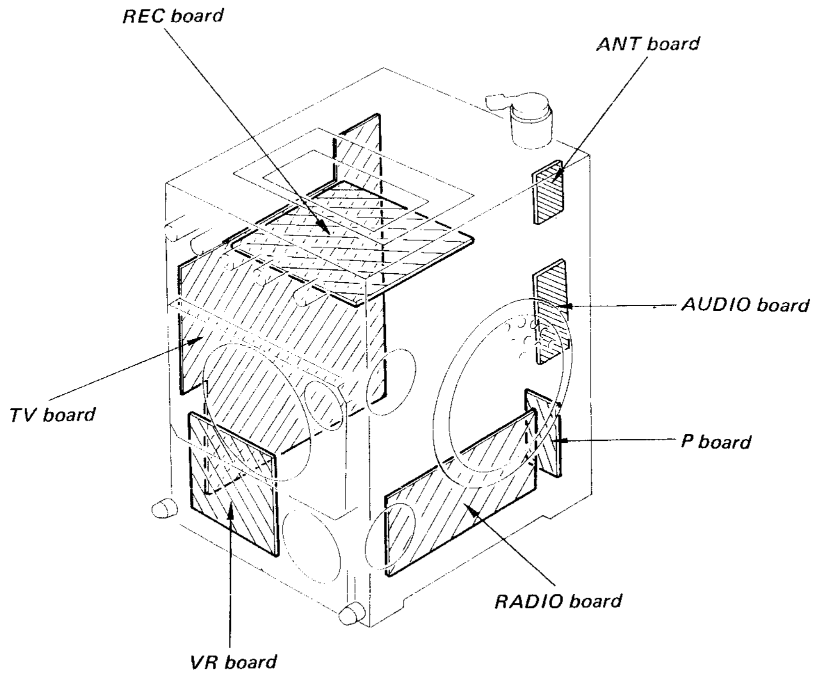
RADIO SECTION

Frequency Range:	FM: 87.5 – 108MHz AM: 530 – 1,605 kHz

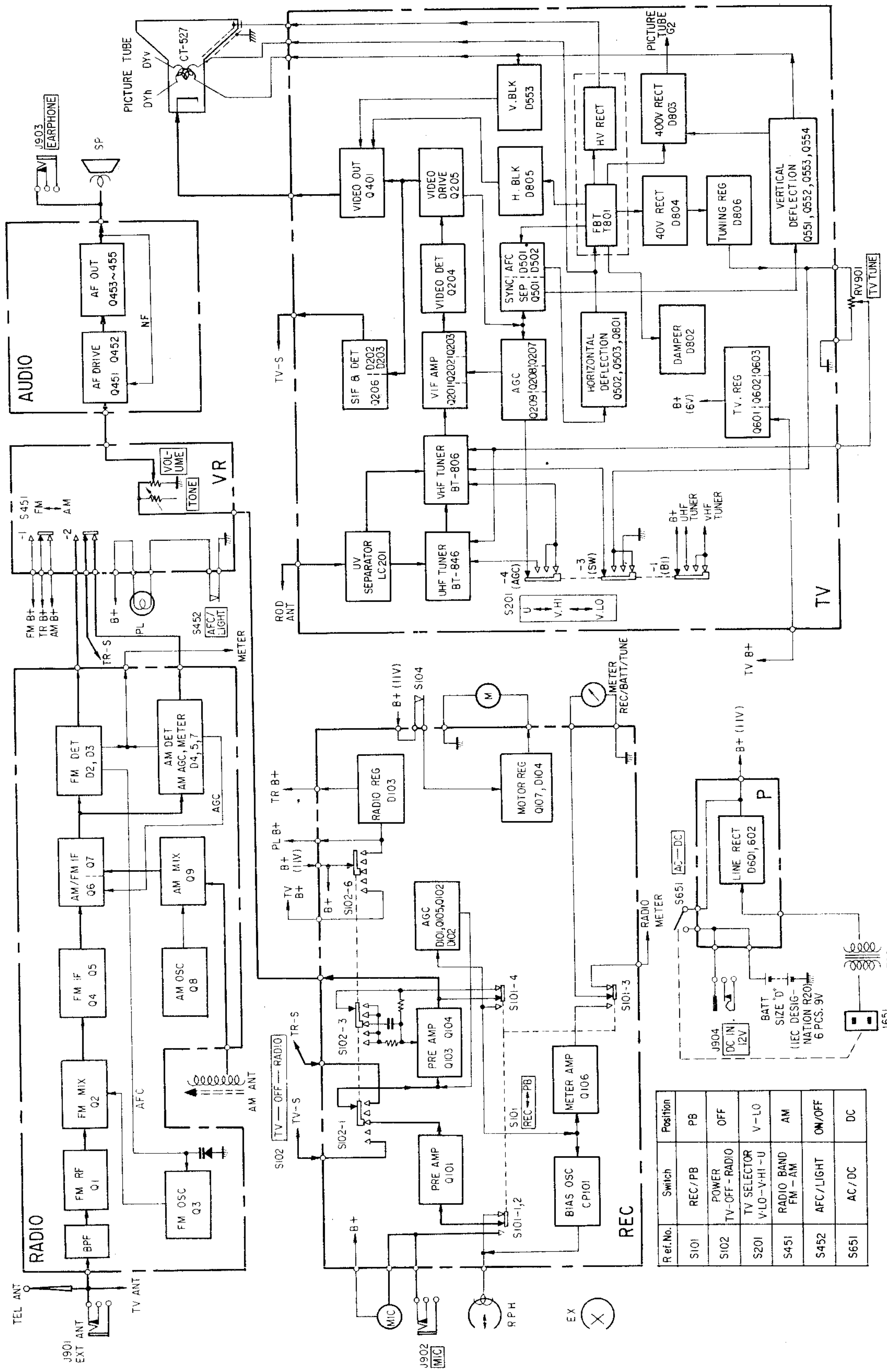
TAPE RECORDER SECTION

Recording System:	2-track 1-channel monaural
Fast Winding Time:	Approx. 1 min. 30 sec. with sony cassette C-60
Accessories Supplied:	Earphone (ME-20H) Cassette tape (C-30) AC power cord Shorting plug SP-100 Head cleaning tips TV hood Shoulder strap Instruction manual Batteries (size "D", IEC designation R20)

CIRCUIT BOARDS LOCATION



SECTION 1
BLOCK DIAGRAM


PICTURE TUBE
CT-527
DYh
DYv
J903 EARPHONE
SP
AUDIO
AF DRIVE Q451 Q452
AF OUT Q453~455
NF
VR
VOL-UME
TONE
S451 FM AM
-1
-2
FM B+
TR B+
AM B+
B+
PL
S452 AFC/LIGHT
TR-S
METER
RADIO
BPF
FM RF Q1
FM MIX Q2
FM IF Q4 Q5
AM/FM IF Q6 Q7
FM DET D2, D3
AM DET AM AGC, METER D4, 5, 7
AM MIX Q9
AM OSC Q8
FM OSC Q3
AFC
AGC
AM ANT
TEL ANT
J901 EXT ANT
TV ANT
TV
ROD ANT
TV-S
UV SEPARATOR LC201
UHF TUNER BT-846
VHF TUNER BT-806
VIF AMP Q201 Q202 Q203
SIF & DET Q206 D202 D203
VIDEO DET Q204
VIDEO DRIVE Q205
VIDEO OUT Q401
AGC Q209 Q208 Q207
SYNC SEP Q501
AFC D501 D502
H. BLK D805
V. BLK D553
HORIZONTAL DEFLECTION Q502, Q503, Q801
FBT T801
HV RECT
400V RECT D803
40V RECT D804
TUNING REG D806
DAMPER D802
VERTICAL DEFLECTION Q551, Q552, Q553, Q554
PICTURE TUBE G2
RV901 TV TUNE
T.V. REG Q601 Q602 Q603
B+ (6V)
TV B+
S201 -4 (AGC) -3 (SW) -1 (B1)
U V.HI V.LO
B+ UHF TUNER VHF TUNER
REC
B+ (11V)
S104
M
METER REC/BATT/TUNE
RADIO REG D103
MOTOR REG Q107, D104
TR B+
PL B+
B+ (11V)
TV B+
B+
S102-6
AGC D101, Q105, Q102 D102
PRE AMP Q103 Q104
S102-3
S101-4
S101-3
RADIO METER
TR-S
TV — OFF — RADIO
TV-S
S102
S102-1
METER AMP Q106
S101 REC — PB
PRE AMP Q101
BIAS OSC CP101
S101-1, 2
B+
MIC
J902 MIC
RPH
EX
P
B+ (11V)
LINE RECT D601, 602
S651 AC — DC
J904 DC IN 12V
BATT SIZE "D" (IEC DESIGNATION R20) 6 PCS. 9V
T901 PT
J651 AC 120V

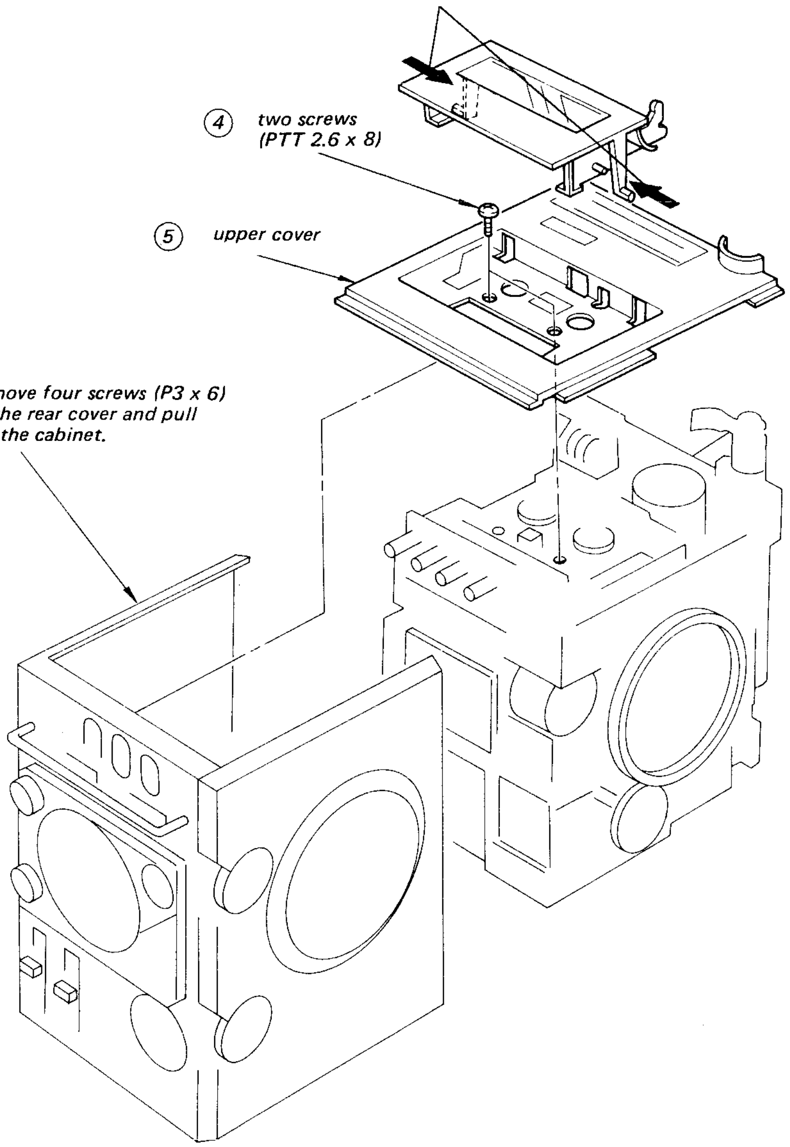
Ref.No.	Switch	Position
S101	REC/PB	PB
S102	POWER TV-OFF-RADIO	OFF
S201	TV SELECTOR V-LO-VHI-U	V-LO
S451	RADIO BAND FM-AM	AM
S452	AFC/LIGHT	ON/OFF
S651	AC/DC	DC

SECTION 2
DISASSEMBLY

Note:

- Remove the parts in the numerical order.
- All screws are Phillips (cross recess) type unless otherwise noted.

2-1. CABINET AND UPPER COVER REMOVAL



① Pull out knobs.
- *TV/RADIO POWER knob*
- *CONTRAST knob*
- *TV SELECTOR knob*
- *TV TUNE knob*
- *RADIO TUNE knob*
- *VOLUME knob*
- *TONE knob*

③ Push these claws and remove the cassette holder.

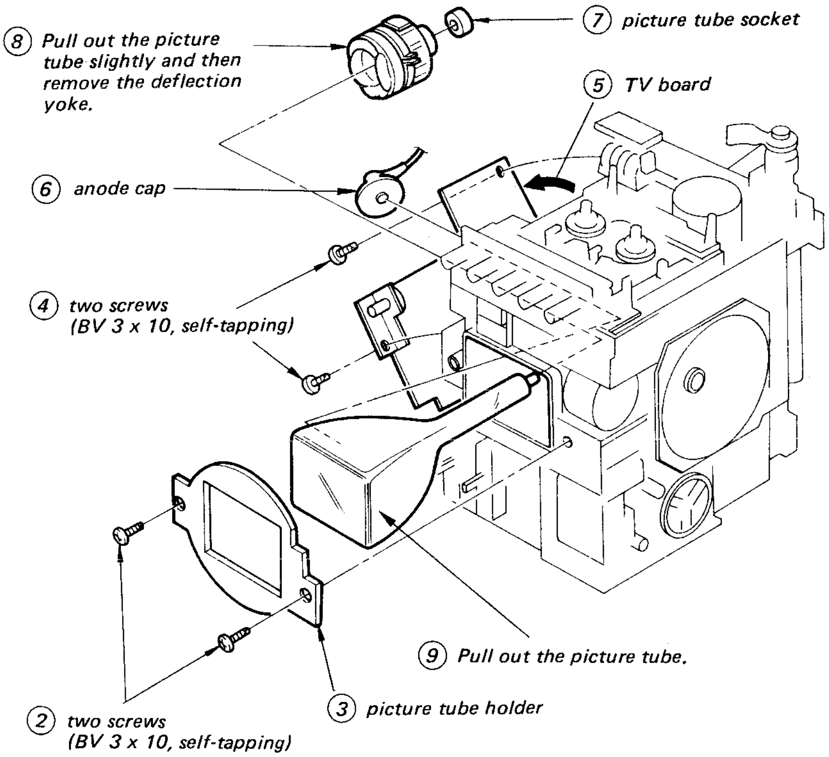
④ two screws (PTT 2.6 x 8)

⑤ upper cover

② Remove four screws (P3 x 6) on the rear cover and pull out the cabinet.

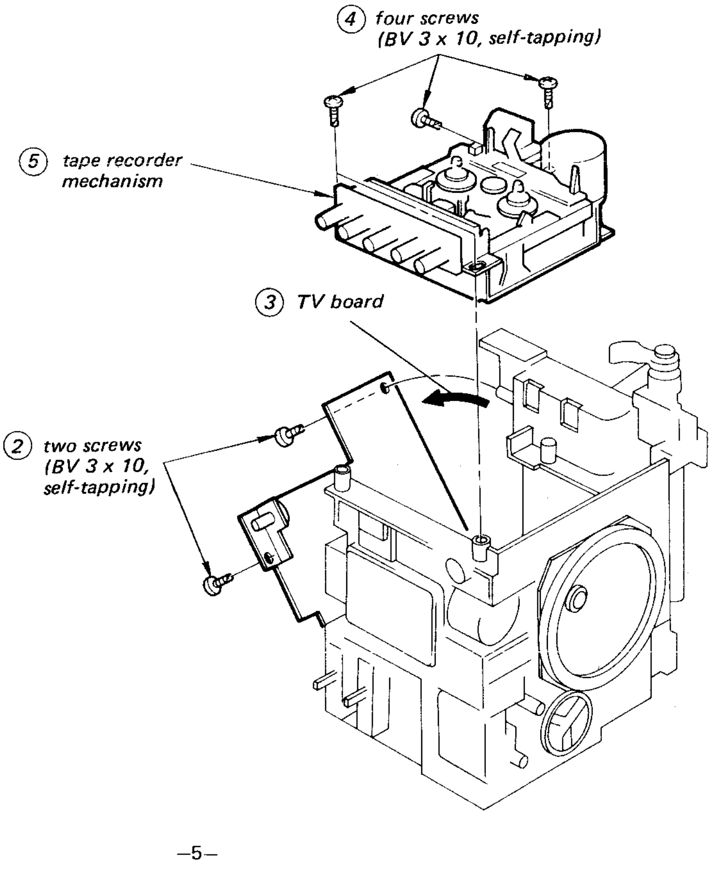
2-2. PICTURE TUBE REMOVAL

① *Remove the cabinet.*

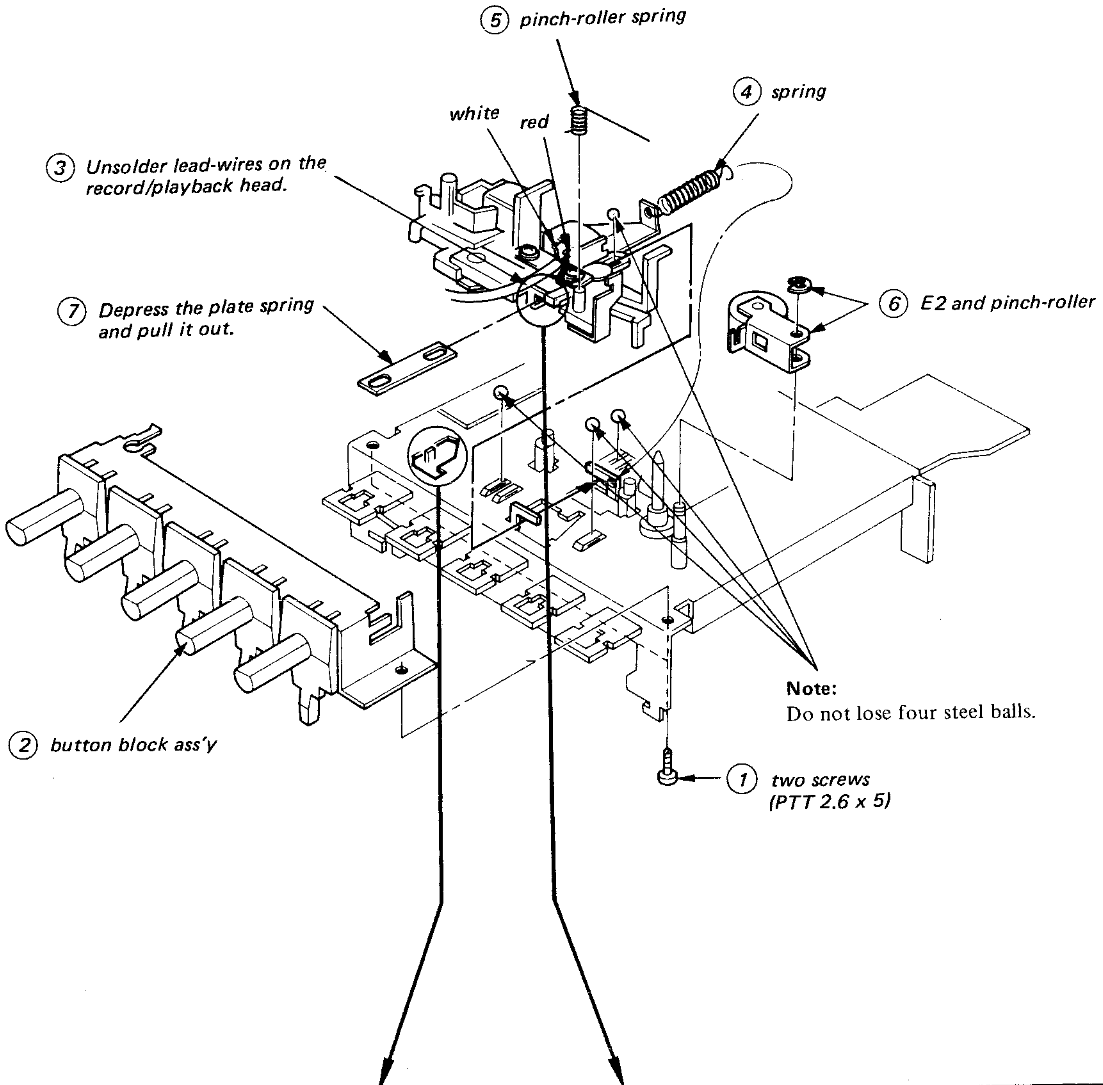

⑧ Pull out the picture tube slightly and then remove the deflection yoke.
⑦ picture tube socket
⑤ TV board
⑥ anode cap
④ two screws (BV 3 x 10, self-tapping)
⑨ Pull out the picture tube.
③ picture tube holder
② two screws (BV 3 x 10, self-tapping)

2-3. TAPE RECORDER MECHANISM REMOVAL

① *Remove the cabinet.*

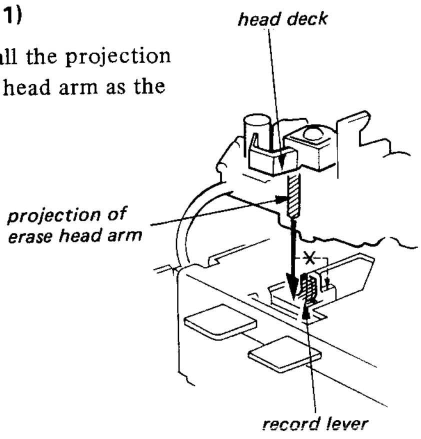

④ four screws (BV 3 x 10, self-tapping)
⑤ tape recorder mechanism
③ TV board
② two screws (BV 3 x 10, self-tapping)

2-4. HEAD DECK REMOVAL


⑤ pinch-roller spring
④ spring
white
red
③ Unsolder lead-wires on the record/playback head.
⑦ Depress the plate spring and pull it out.
⑥ E2 and pinch-roller
Note:
Do not lose four steel balls.
② button block ass'y
① two screws (PTT 2.6 x 5)

CAUTION (1)

Do not install the projection of the erase head arm as the dotted line.


head deck
projection of erase head arm
record lever

CAUTION (2) Put the projection of the head deck ass'y upon the hole of the plate spring

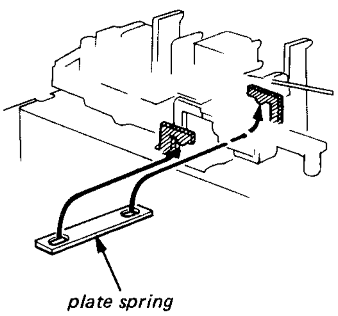
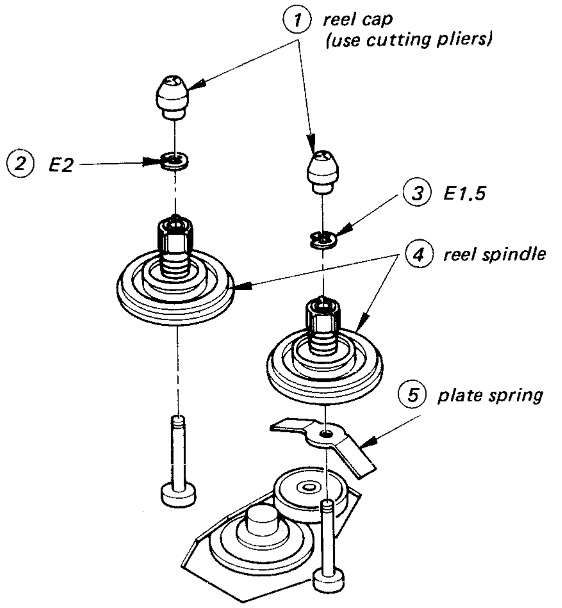
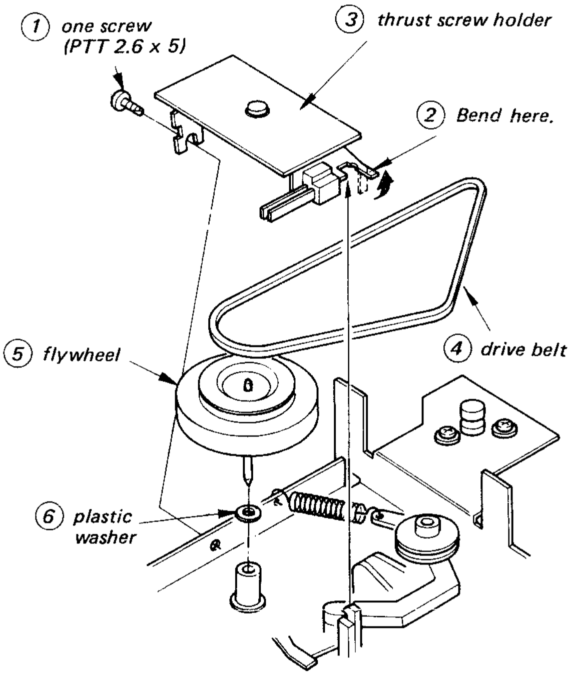


plate spring

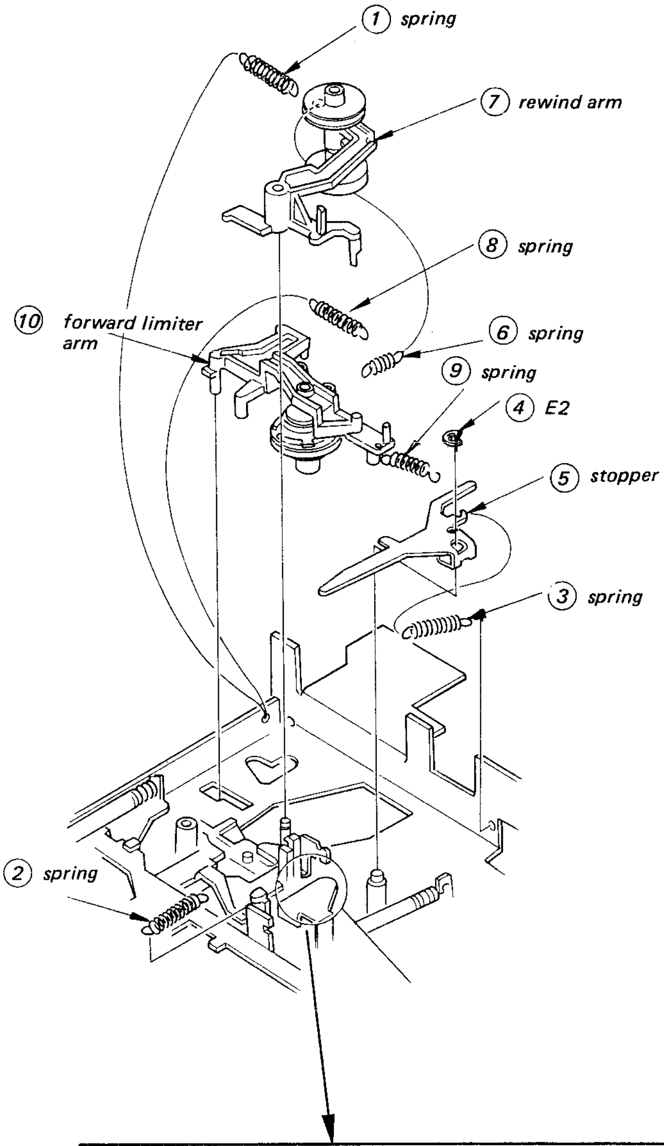
2-5. REEL SPINDLES REMOVAL


① reel cap (use cutting pliers)
② E2
③ E1.5
④ reel spindle
⑤ plate spring

2-6. DRIVE BELT AND FLYWHEEL REMOVAL

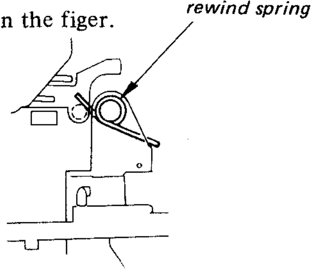

① one screw (PTT 2.6 x 5)
③ thrust screw holder
② Bend here.
⑤ flywheel
④ drive belt
⑥ plastic washer

2-7. REWIND ARM AND FORWARD LIMITER ARM REMOVAL

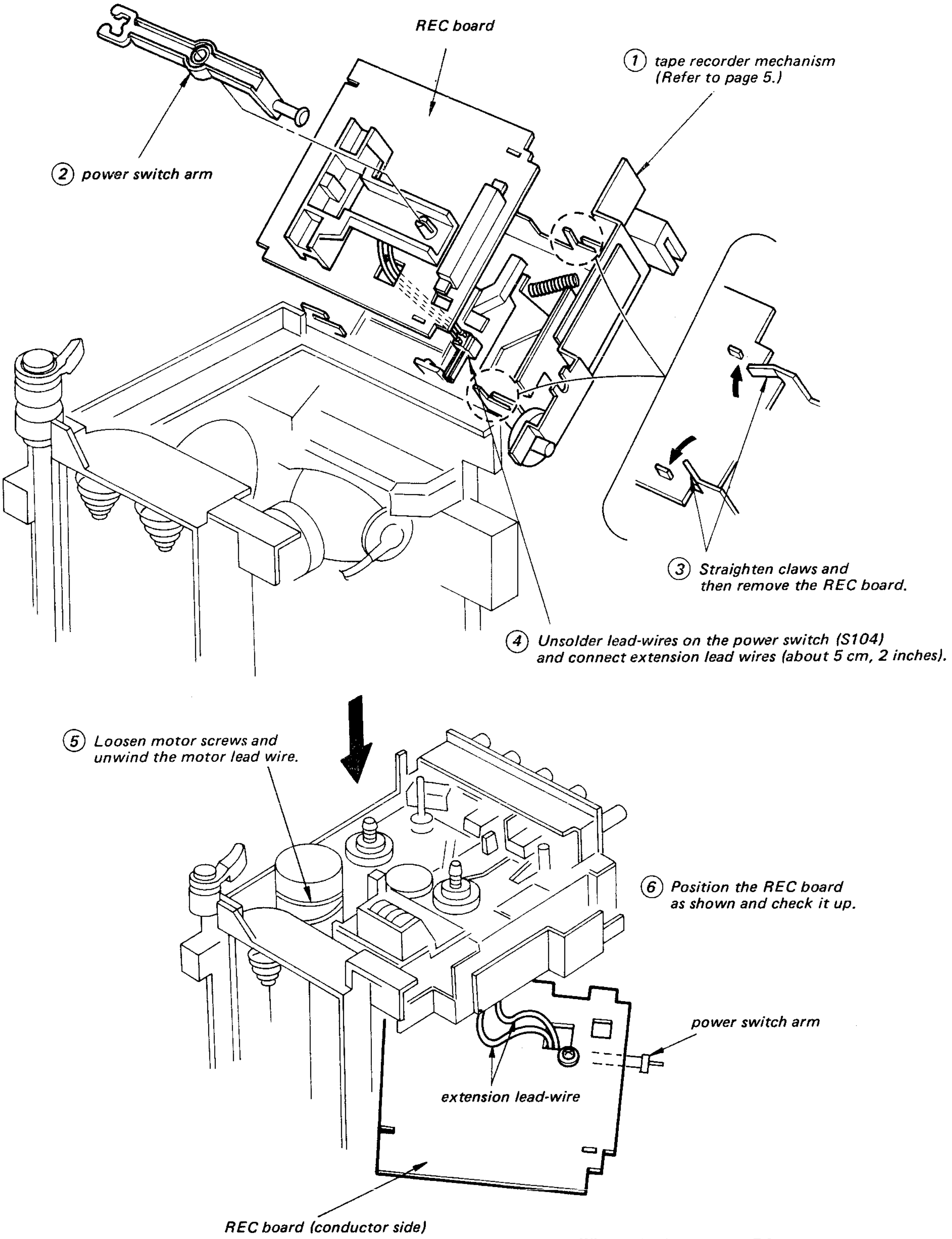

① spring
⑦ rewind arm
⑧ spring
⑩ forward limiter arm
⑥ spring
⑨ spring
④ E2
⑤ stopper
③ spring
② spring

CAUTION

Install the rewind spring as shown in the figer.


rewind spring

2-8. REC BOARD REMOVAL (FOR CHECKING IT UP)


REC board
power switch arm
extension lead-wire
REC board (conductor side)

① tape recorder mechanism (Refer to page 5.)

② power switch arm

③ Straighten claws and then remove the REC board.

④ Unsolder lead-wires on the power switch (S104) and connect extension lead wires (about 5 cm, 2 inches).

⑤ Loosen motor screws and unwind the motor lead wire.

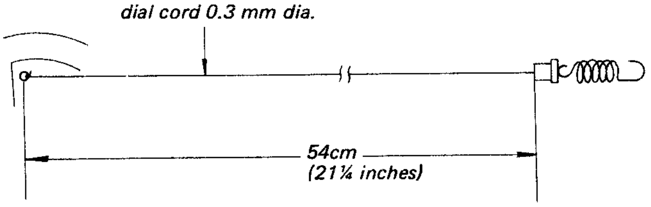
⑥ Position the REC board as shown and check it up.

Note: When checking the REC board, install the power switch arm.

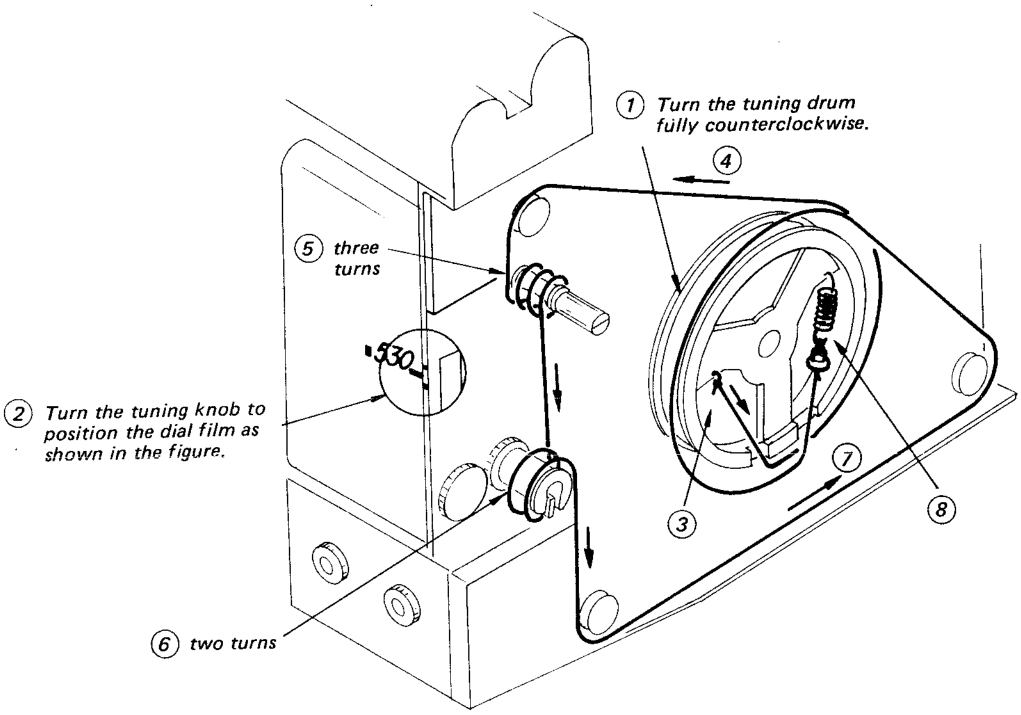
Do not touch the REC board with other parts.

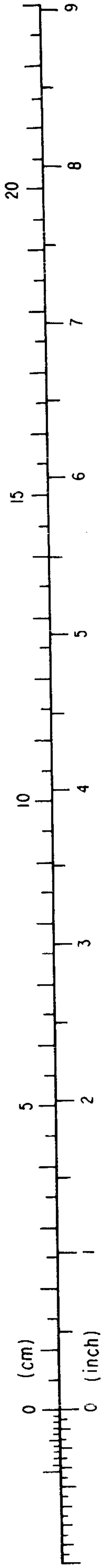
2-9. DIAL CORD STRINGING

- **Preparation**


dial cord 0.3 mm dia.
54cm
(21¼ inches)

- **Dial Cord Stringing**


① Turn the tuning drum fully counterclockwise.
④
⑤ three turns
530
② Turn the tuning knob to position the dial film as shown in the figure.
⑦
③
⑧
⑥ two turns


0
5
10
15
20
(cm)
0
1
2
3
4
5
6
7
8
9
(inch)

SECTION 3
ADJUSTMENTS

3-1. TAPE RECORDER SECTION

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	

2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply a suitable locking compound to the parts adjusted.
5. The adjustments should be performed with 9 V dc supplied to terminals of battery case.

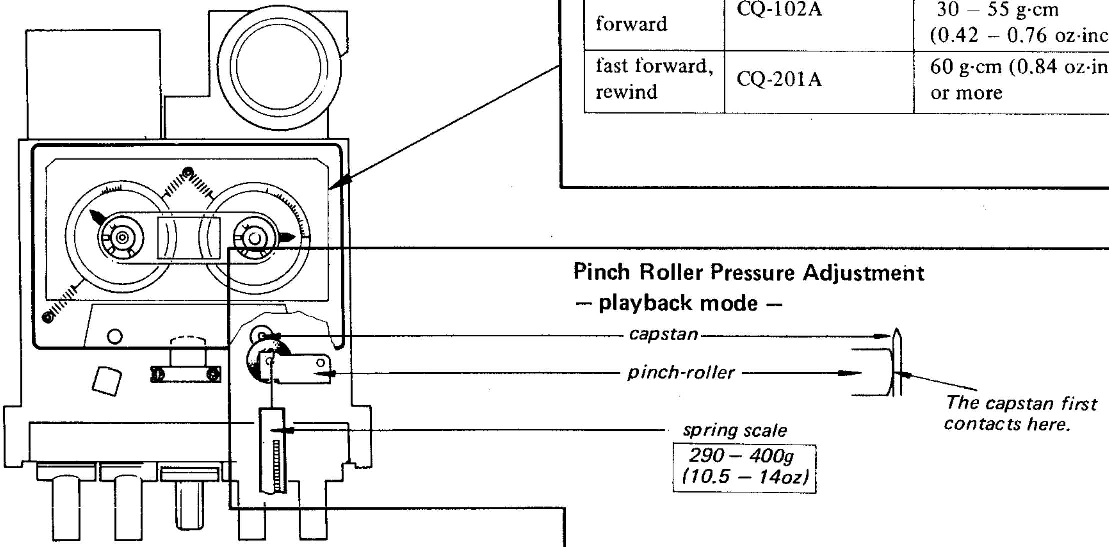
Note: Test Equipment Required

1. VTVM
2. Regulated DC Power Supply
3. Speed Cecker LFM-30 or Digital Frequency Counter.
4. Af Oscillator
5. Attenuator.
6. Spring Scale.
7. Cassette Torque Meter CQ-102A and CQ-201A
8. Test Tape P-4-A81.
9. Blank Tape CS-10

MECHANICAL ADJUSTMENTS

Torque Measurement

Mode	SONY torque meter	Torque
forward	CQ-102A	30 – 55 g·cm (0.42 – 0.76 oz·inch)
fast forward, rewind	CQ-201A	60 g·cm (0.84 oz·inch) or more



Pinch Roller Pressure Adjustment
– playback mode –

1. Pull the spring scale.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts to rotate.

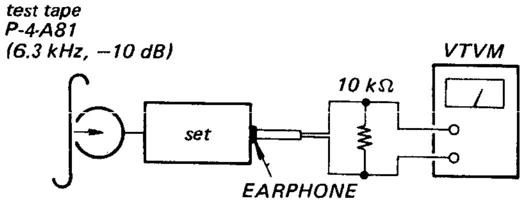
Record/playback Head Azimuth Adjustment

Setting

VOLUME control: mechanical mid

Procedure:

1. Mode: playback



2. Turn the adjustment screw for the highest VTVM reading.

Note: Several peaks may appear, take the highest.

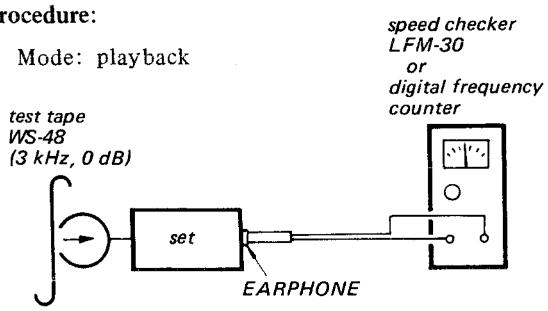
Tape Speed Adjustment

Setting:

VOLUME control   mechanical mid

Procedure:

Mode: playback

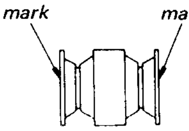

speed checker
LFM-30
or
digital frequency
counter
test tape
WS-48
(3 kHz, 0 dB)
set
EARPHONE

Specification:

Test Tape	*Speed Checker*	*Digital Frequency Counter*
WS-48	−3.5% to +2.5%	2,895 to 3,075Hz

Frequency difference between beginning and end of tape should be within 1% (30 Hz). WS-48

If necessary, replace the motor pulley.



Motor Pully Part No	**Mark**	**Tape speed Change**
9-911-875-03	F	down ↑
9-911-875-04	G	
9-911-875-04	H	
9-911-875-05	J	
9-911-875-05	K	↓ up

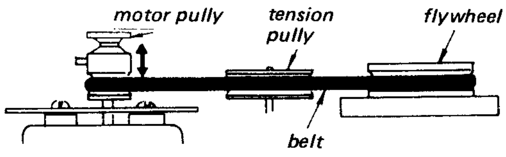
Note: After this adjustment, perform the motor pulley height adjustment.

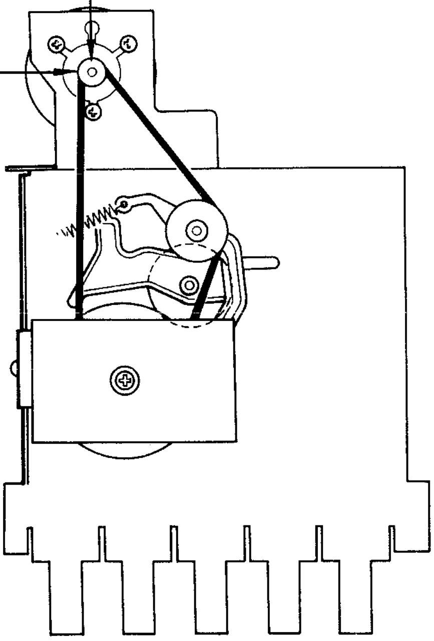
Motor Pulley Height Adjustment

After replacing the motor pulley or the flywheel, this adjustment should be performed.

Procedure:

1. Keep the set horizontal.
2. Adjust the motor pulley height so that the drive belt is straight without twist.

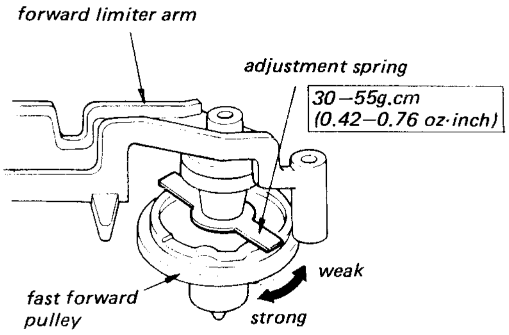

motor pully
tension pully
flywheel
belt



Forward Torque Adjustment

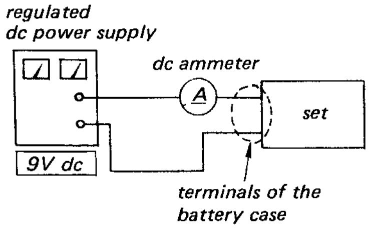
– playback mode –

1. Place the type CQ-102A cassette torque meter in the set.
2. Adjust the position of the adjustment spring to obtain the indicated torque.

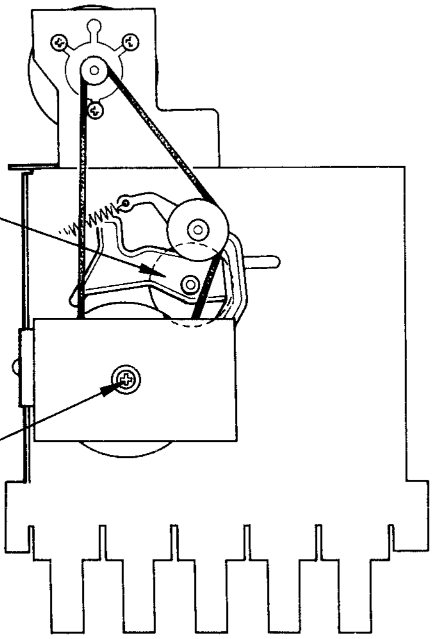

forward limiter arm
adjustment spring
30–55g.cm
(0.42–0.76 oz·inch)
weak
fast forward
pulley
strong

Flywheel Thrust Play Adjustment

– playback mode –


regulated
dc power supply
dc ammeter
A
set
9V dc
terminals of the
battery case

1. Turn the thrust screw counterclockwise until the screw tip is detached from the flywheel shaft.
2. Gradually turn the thrust screw clockwise to the position where the motor current suddenly increases.
3. Then, turn the thrust screw counterclockwise about ¼ turn from the position obtained in step 2.

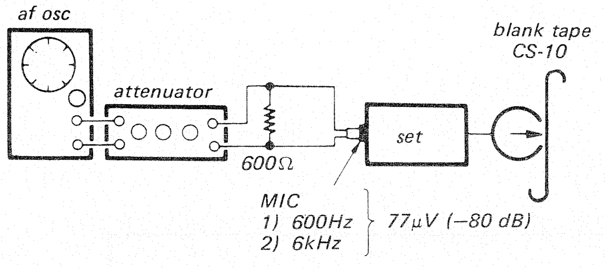


ELECTRICAL ADJUSTMENTS

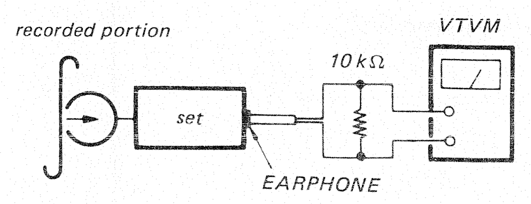
Record Bias Adjustment

Procedure:

1. Mode: record


af osc
attenuator
600Ω
set
blank tape
CS-10
MIC
1) 600Hz
2) 6kHz
77μV (−80 dB)

2. Mode: playback


recorded portion
set
10 kΩ
VTVM
EARPHONE

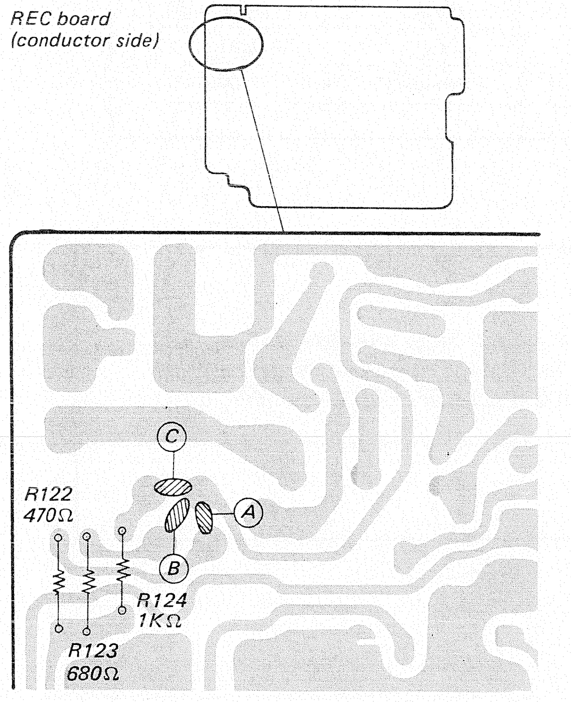
Specification:

Level diference between
600Hz and 6kHz signals: within ±3 dB

3. If necessary, adjust pattern connection.

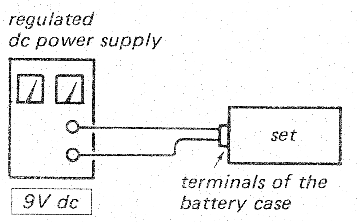
Pattern Connection	6 kHz Level
Ⓐ	down
Ⓑ	↕
Ⓒ	UP

Adjustment Location:

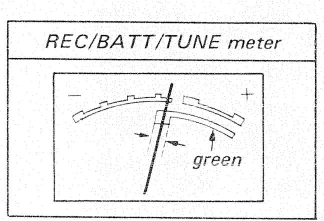

REC board
(conductor side)
Ⓒ
Ⓐ
Ⓑ
R122
470Ω
R124
1KΩ
R123
680Ω

Battery Meter Calibration

Procedure:
Mode: playback

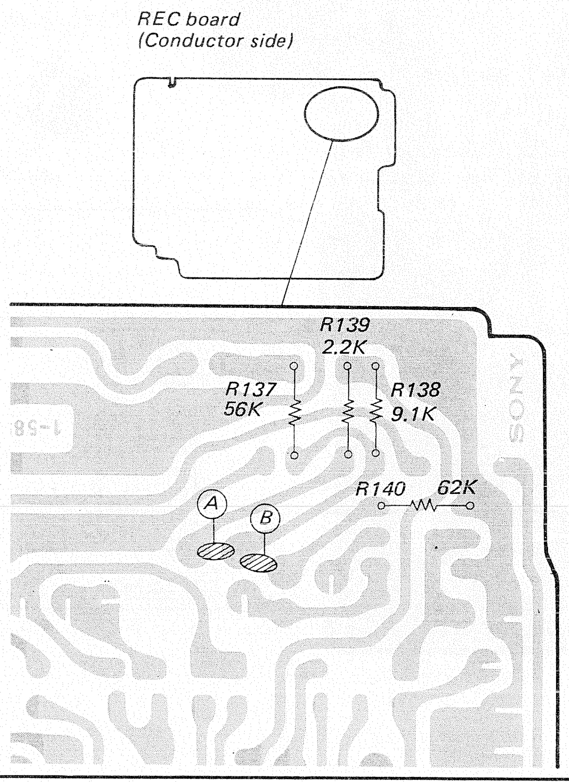

regulated
dc power supply
9V dc
set
terminals of the
battery case

Adjust pattern connection for the specified meter indication.

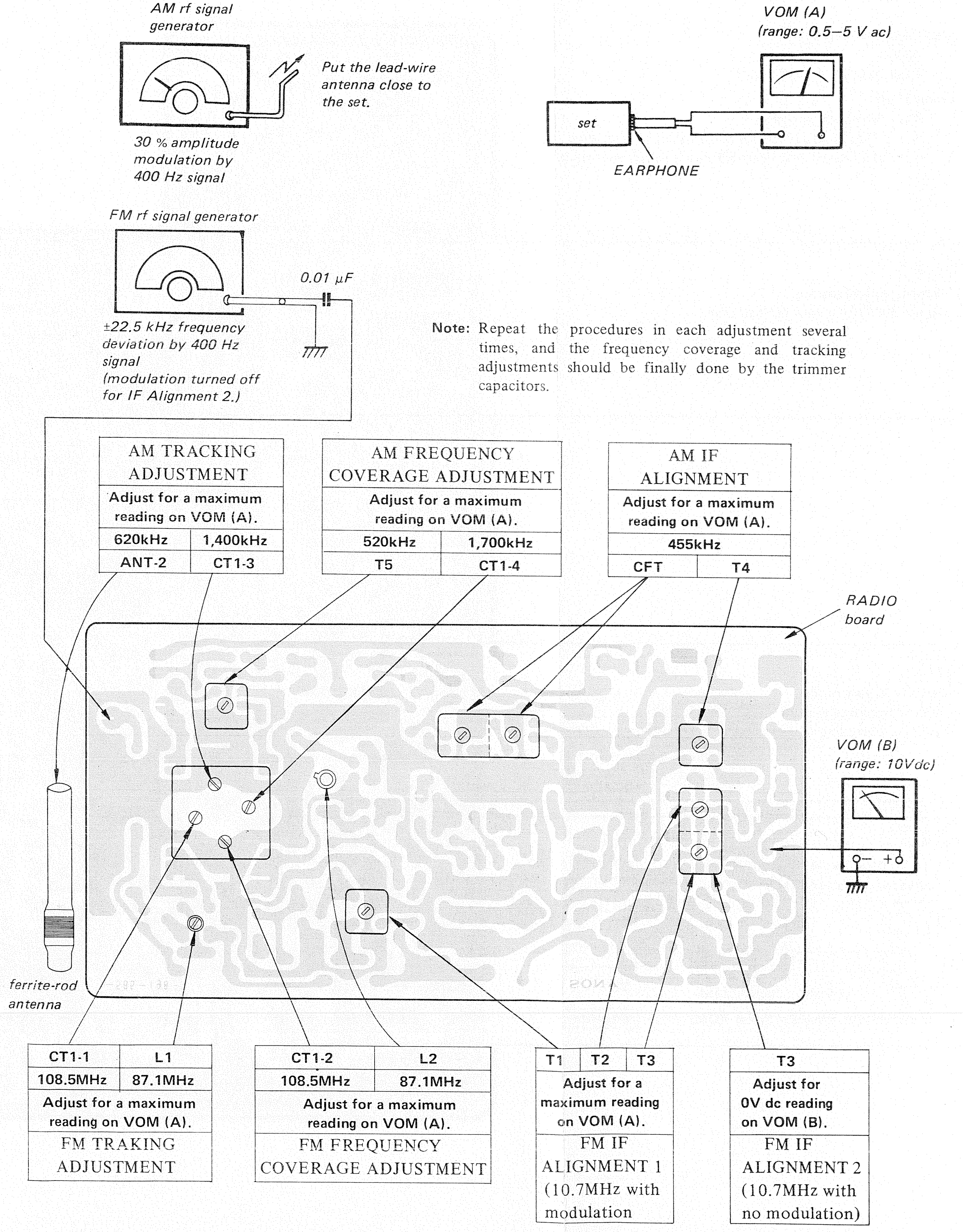

REC/BATT/TUNE meter
−
+
green

Pattern Connection	Pointer Defrection
Ⓐ	+
Open	↕
Ⓑ	−

Adjustment Location:


REC board
(Conductor side)
R139
2.2K
R137
56K
R138
9.1K
R140 62K
Ⓐ
Ⓑ
SONY

3-2. RADIO SECTION


AM rf signal
generator
Put the lead-wire
antenna close to
the set.
30 % amplitude
modulation by
400 Hz signal
VOM (A)
(range: 0.5−5 V ac)
set
EARPHONE
FM rf signal generator
0.01 μF
±22.5 kHz frequency
deviation by 400 Hz
signal
(modulation turned off
for IF Alignment 2.)
RADIO
board
VOM (B)
(range: 10Vdc)
ferrite-rod
antenna

Note: Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM (A).	
620kHz	1,400kHz
ANT-2	CT1-3

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM (A).	
520kHz	1,700kHz
T5	CT1-4

AM IF ALIGNMENT	
Adjust for a maximum reading on VOM (A).	
455kHz	
CFT	T4

CT1-1	L1
108.5MHz	87.1MHz
Adjust for a maximum reading on VOM (A).	
FM TRAKING ADJUSTMENT	

CT1-2	L2
108.5MHz	87.1MHz
Adjust for a maximum reading on VOM (A).	
FM FREQUENCY COVERAGE ADJUSTMENT	

T1	T2	T3
Adjust for a maximum reading on VOM (A).		
FM IF ALIGNMENT 1 (10.7MHz with modulation		

T3
Adjust for 0V dc reading on VOM (B).
FM IF ALIGNMENT 2 (10.7MHz with no modulation)

7

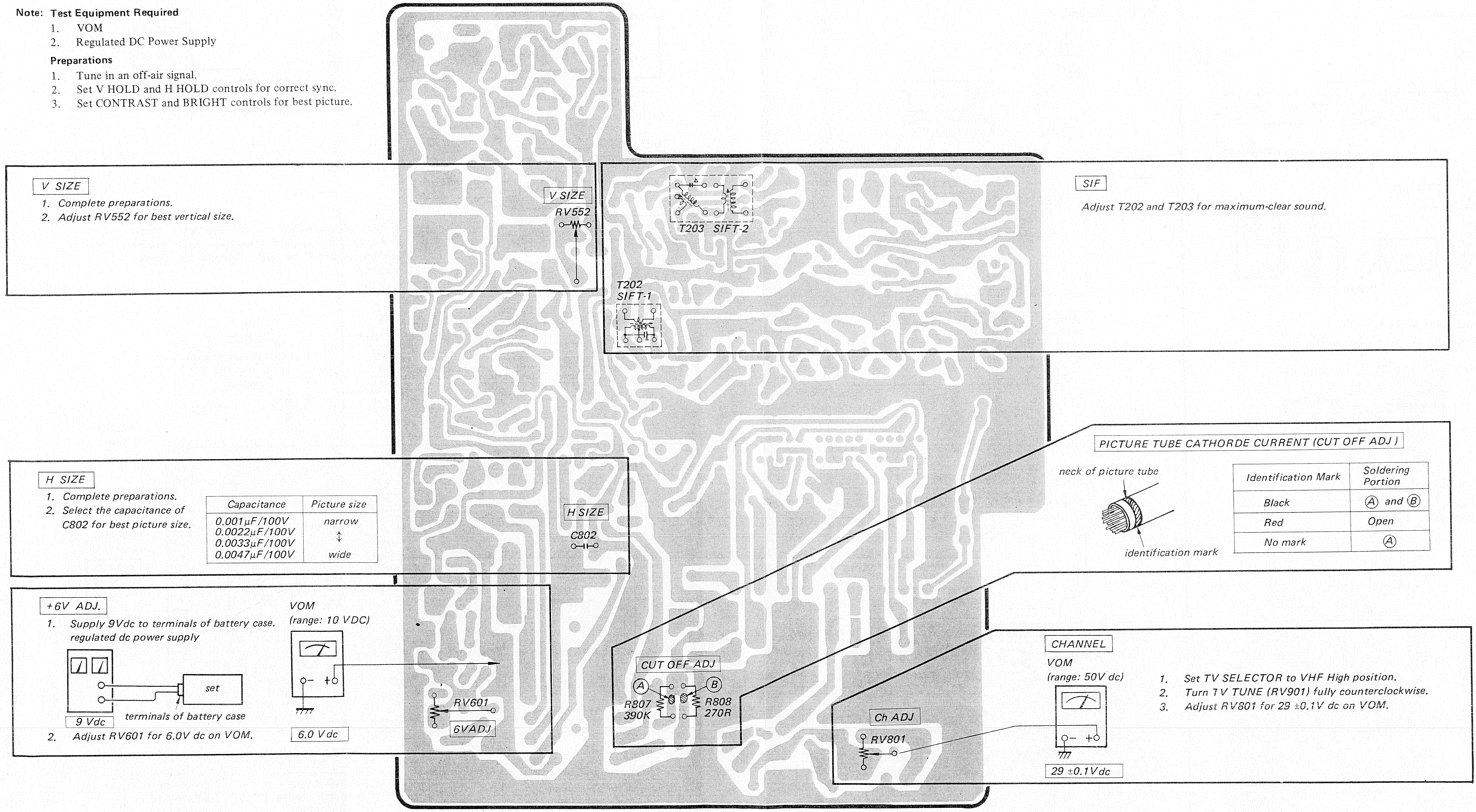
3-3. TV SECTION

Note: Test Equipment Required

1. VOM
2. Regulated DC Power Supply

Preparations

1. Tune in an off-air signal.
2. Set V HOLD and H HOLD controls for correct sync.
3. Set CONTRAST and BRIGHT controls for best picture.


V SIZE
RV552
T203 SIFT-2
T202
SIFT-1
H SIZE
C802
RV601
6VADJ
CUT OFF ADJ
Ⓐ
Ⓑ
R807
390K
R808
270R
Ch ADJ
RV801
set
9 Vdc
terminals of battery case
neck of picture tube
identification mark

V SIZE

1. Complete preparations.
2. Adjust RV552 for best vertical size.

SIF

Adjust T202 and T203 for maximum-clear sound.

H SIZE

1. Complete preparations.
2. Select the capacitance of C802 for best picture size.

Capacitance	Picture size
0.001μF/100V	narrow
0.0022μF/100V	↕
0.0033μF/100V	
0.0047μF/100V	wide

PICTURE TUBE CATHORDE CURRENT (CUT OFF ADJ)

Identification Mark	Soldering Portion
Black	Ⓐ and Ⓑ
Red	Open
No mark	Ⓐ

+6V ADJ.

1. Supply 9Vdc to terminals of battery case. regulated dc power supply
2. Adjust RV601 for 6.0V dc on VOM.

VOM
(range: 10 VDC)

6.0 Vdc

CHANNEL

VOM
(range: 50V dc)

1. Set TV SELECTOR to VHF High position.
2. Turn TV TUNE (RV901) fully counterclockwise.
3. Adjust RV801 for 29 ±0.1V dc on VOM.

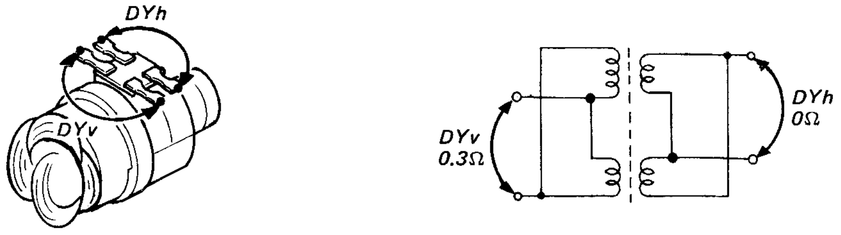
29 ±0.1Vdc

MEMO

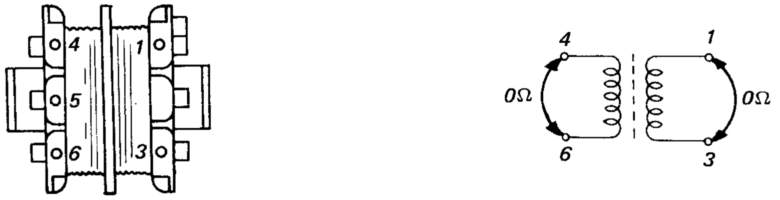
SECTION 4
DIAGRAMS

4-1. DC RESISTANCE AND WINDING DIAGRAMS OF COILS AND TRANSFORMERS

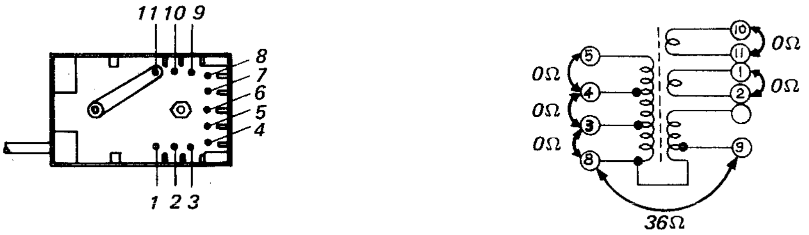
L902 DY


DYh
DYv
DYv
0.3Ω
DYh
0Ω

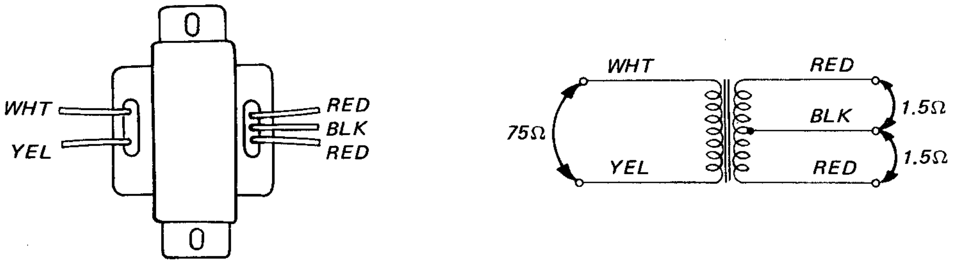
T401 HT


4
1
5
6
3
4
1
0Ω
0Ω
6
3

T801 FBT


11 10 9
8
7
6
5
4
1 2 3
10
11
0Ω
5
1
0Ω
0Ω
4
2
0Ω
3
0Ω
8
9
36Ω

T901 PT


WHT
YEL
RED
BLK
RED
WHT
RED
75Ω
BLK
1.5Ω
YEL
RED
1.5Ω

Note:

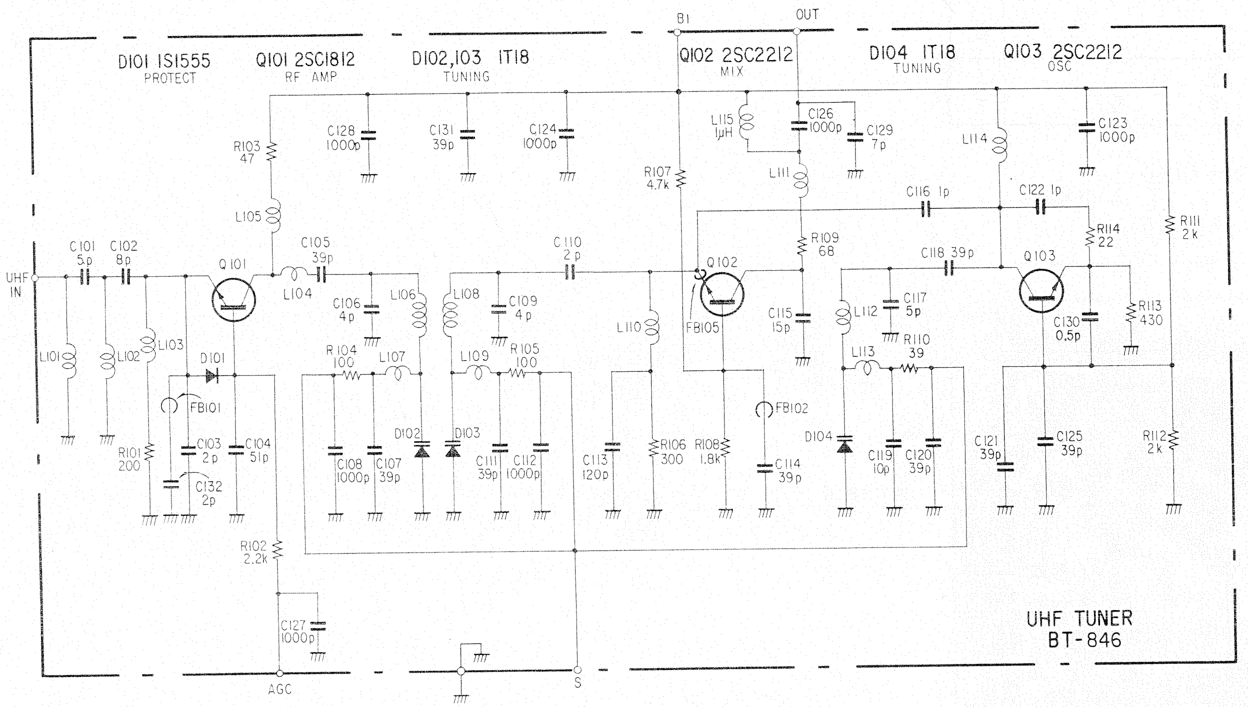
DC resistance measurements shown with coils and transformers disconnected from circuit.

P

4-2. VHF AND UHF TUNER SCHEMATIC DIAGRAMS

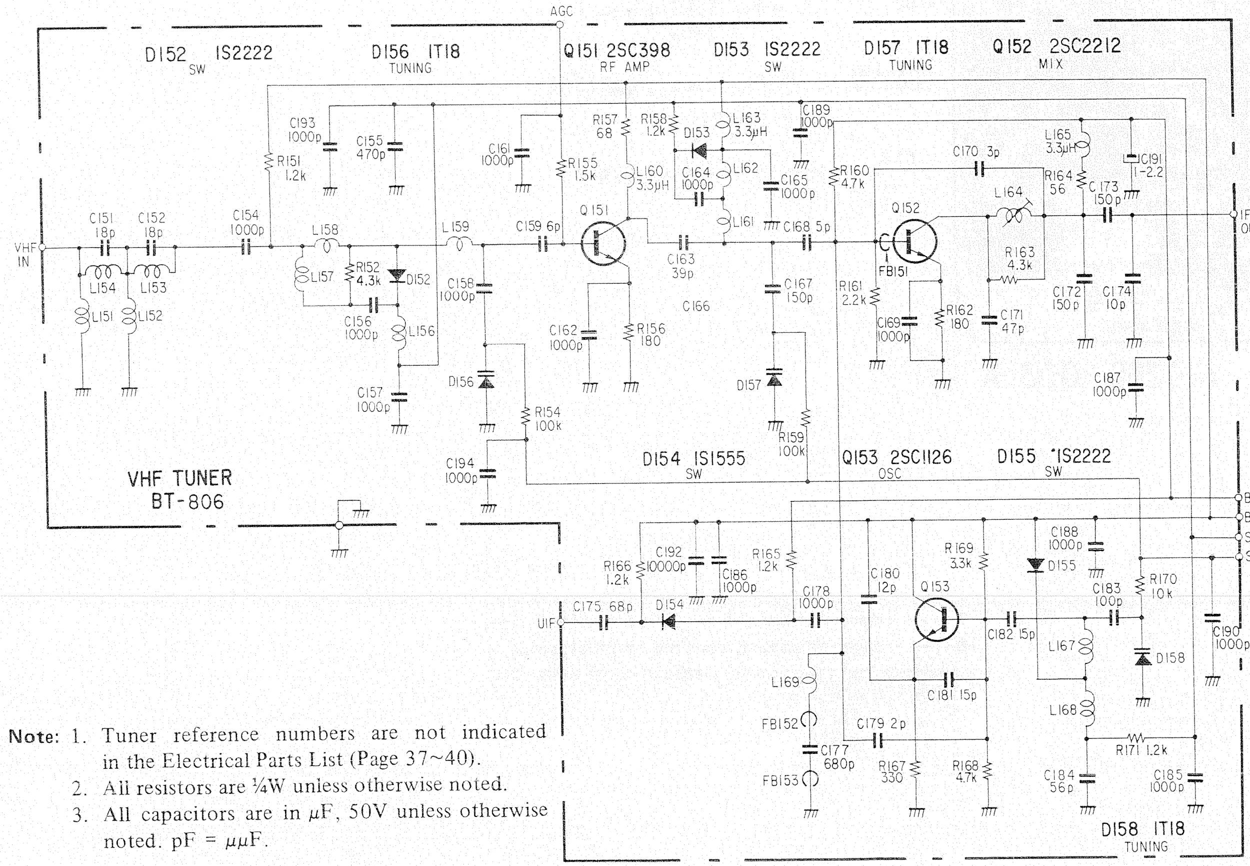
– UHF Tuner –

(BT-846)


D101 1S1555 PROTECT
Q101 2SC1812 RF AMP
D102,103 1T18 TUNING
Q102 2SC2212 MIX
D104 1T18 TUNING
Q103 2SC2212 OSC
B1
OUT
UHF IN
AGC
S
UHF TUNER
BT-846
C101 5p
C102 8p
C103 2p
C104 51p
C105 39p
C106 4p
C107 39p
C108 1000p
C109 4p
C110 2p
C111 39p
C112 1000p
C113 120p
C114 39p
C115 15p
C116 1p
C117 5p
C118 39p
C119 10p
C120 39p
C121 39p
C122 1p
C123 1000p
C124 1000p
C125 39p
C126 1000p
C127 1000p
C128 1000p
C129 7p
C130 0.5p
C131 39p
C132 2p
R101 200
R102 2.2k
R103 47
R104 100
R105 100
R106 300
R108 1.8k
R107 4.7k
R109 68
R110 39
R111 2k
R112 2k
R113 430
R114 22
L101
L102
L103
L104
L105
L106
L107
L108
L109
L110
L111
L112
L113
L114
L115 1μH
FB101
FB102
FB105

–VHF Tuner –

(BT-806)

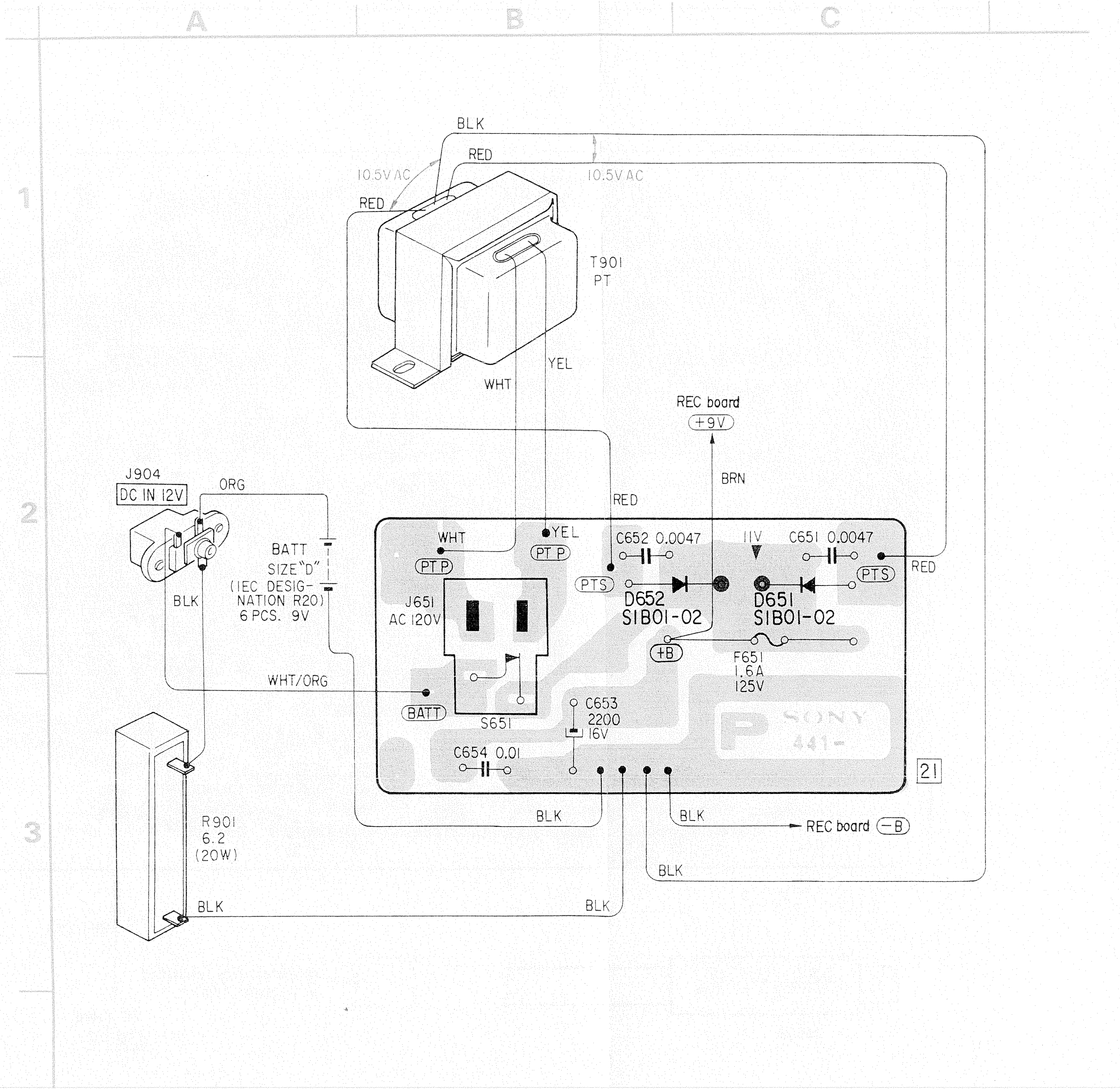

D152 1S2222 SW
D156 1T18 TUNING
Q151 2SC398 RF AMP
D153 1S2222 SW
D157 1T18 TUNING
Q152 2SC2212 MIX
D154 1S1555 SW
Q153 2SC1126 OSC
D155 1S2222 SW
D158 1T18 TUNING
AGC
VHF IN
IF OUT
UIF
B1
B2
SW
S
VHF TUNER
BT-806
C151 18p
C152 18p
C154 1000p
C155 470p
C156 1000p
C157 1000p
C158 1000p
C159 6p
C161 1000p
C162 1000p
C163 39p
C164 1000p
C165 1000p
C166
C167 150p
C168 5p
C169 1000p
C170 3p
C171 47p
C172 150p
C173 150p
C174 10p
C175 68p
C177 680p
C178 1000p
C179 2p
C180 12p
C181 15p
C182 15p
C183 100p
C184 56p
C185 1000p
C186 1000p
C187 1000p
C188 1000p
C189 1000p
C190 1000p
C191 1-2.2
C192 10000p
C193 1000p
C194 1000p
R151 1.2k
R152 4.3k
R154 100k
R155 1.5k
R156 180
R157 68
R158 1.2k
R159 100k
R160 4.7k
R161 2.2k
R162 180
R163 4.3k
R164 56
R165 1.2k
R166 1.2k
R167 330
R168 4.7k
R169 3.3k
R170 10k
R171 1.2k
L151
L152
L153
L154
L156
L157
L158
L159
L160 3.3μH
L161
L162
L163 3.3μH
L164
L165 3.3μH
L167
L168
L169
FB151
FB152
FB153

Note: 1. Tuner reference numbers are not indicated in the Electrical Parts List (Page 37~40).
2. All resistors are ¼W unless otherwise noted.
3. All capacitors are in μF, 50V unless otherwise noted. pF = μμF.

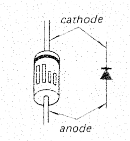
4-3. MOUNTING DIAGRAMS

– Conductor Side –

– P Board –


A
B
C
1
2
3
BLK
RED
10.5V AC
10.5V AC
RED
T901
PT
WHT
YEL
REC board
+9V
BRN
J904
DC IN 12V
ORG
BATT SIZE "D" (IEC DESIGNATION R20) 6 PCS. 9V
BLK
RED
WHT
YEL
PT P
PT P
C652 0.0047
11V
C651 0.0047
PT S
PT S
RED
J651 AC 120V
D652 S1B01-02
D651 S1B01-02
+B
F651 1.6A 125V
WHT/ORG
BATT
S651
C653 2200 16V
C654 0.01
SONY
P
441-
21
R901 6.2 (20W)
BLK
BLK
BLK
REC board –B
BLK
BLK

S1B01-02

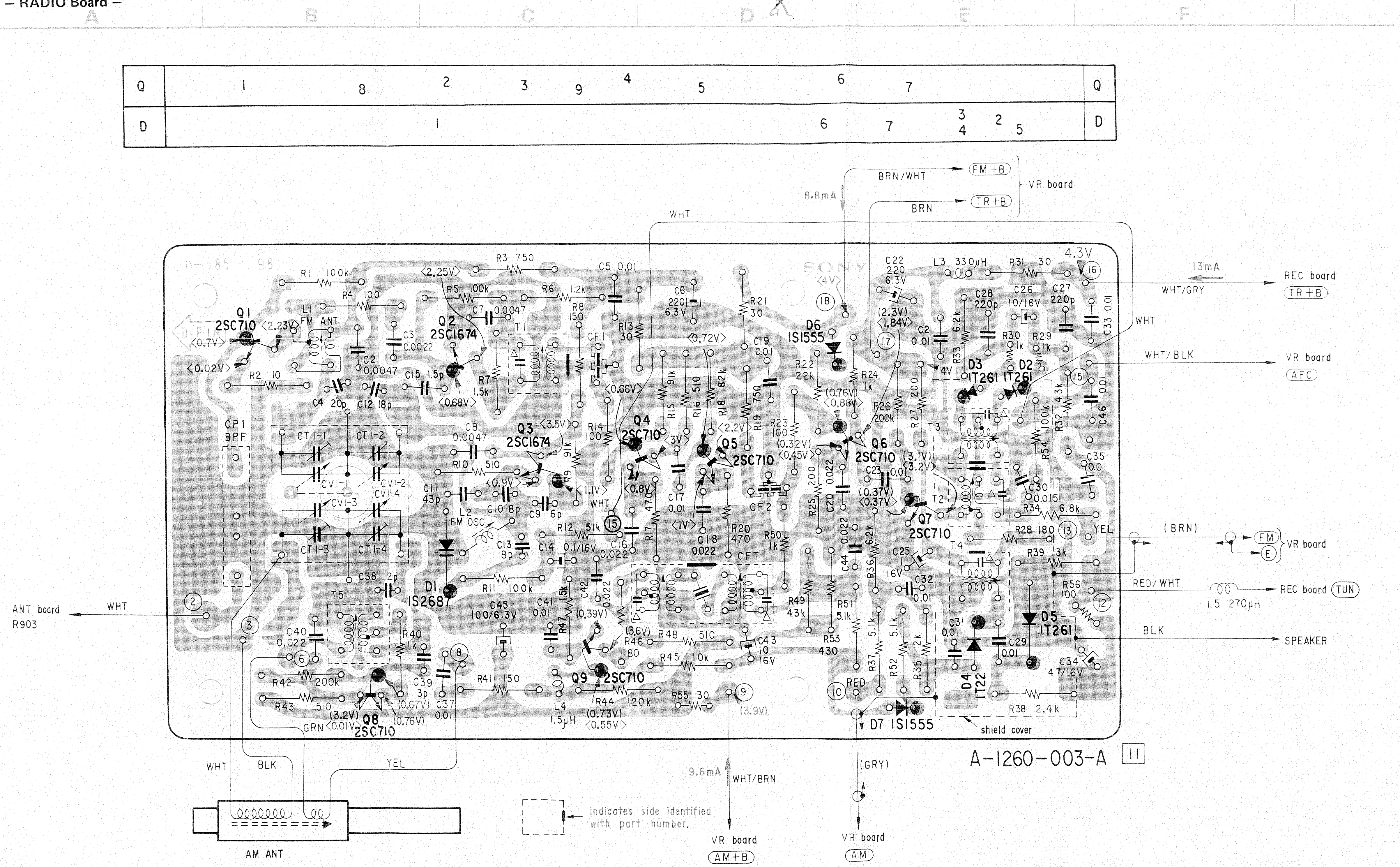

cathode
anode

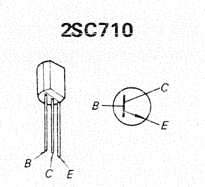
Note: ● ○—— : parts extracted from the component side.
● ●—— : parts extracted from the conductor side.

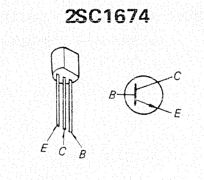
FX-310UW FX-310UW

RADIO RADIO

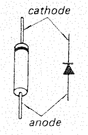
– RADIO Board –


A
B
C
D
E
F
1
2
3
4
Q 1 8 2 3 9 4 5 6 7 Q
D 1 6 7 3 4 2 5 D
BRN/WHT
FM+B
VR board
8.8mA
BRN
TR+B
WHT
SONY
Q1 2SC710
Q2 2SC1674
Q3 2SC1674
Q4 2SC710
Q5 2SC710
Q6 2SC710
Q7 2SC710
Q8 2SC710
Q9 2SC710
D1 1S2687
D2 1T261
D3 1T261
D4 1T22
D5 1T261
D6 1S1555
D7 1S1555
L1 FM ANT
L2 FM OSC
L3 330μH
L4 1.5μH
T1
T2
T3
T4
T5
CF1
CF2
CFT
CP1 BPF
CT1-1
CT1-2
CT1-3
CT1-4
CV1-1
CV1-2
CV1-3
CV1-4
4.3V
13mA
WHT/GRY
REC board
TR+B
WHT/BLK
VR board
AFC
(BRN)
FM
E
VR board
YEL
RED/WHT
L5 270μH
REC board TUN
BLK
SPEAKER
ANT board R903
WHT
BLK
YEL
GRN
RED
AM ANT
9.6mA
WHT/BRN
VR board
AM+B
(GRY)
VR board
AM
shield cover
A-1260-003-A 11
indicates side identified with part number.


2SC710


2SC1674

1S1555
1S2687
1T22
1T261


cathode
anode

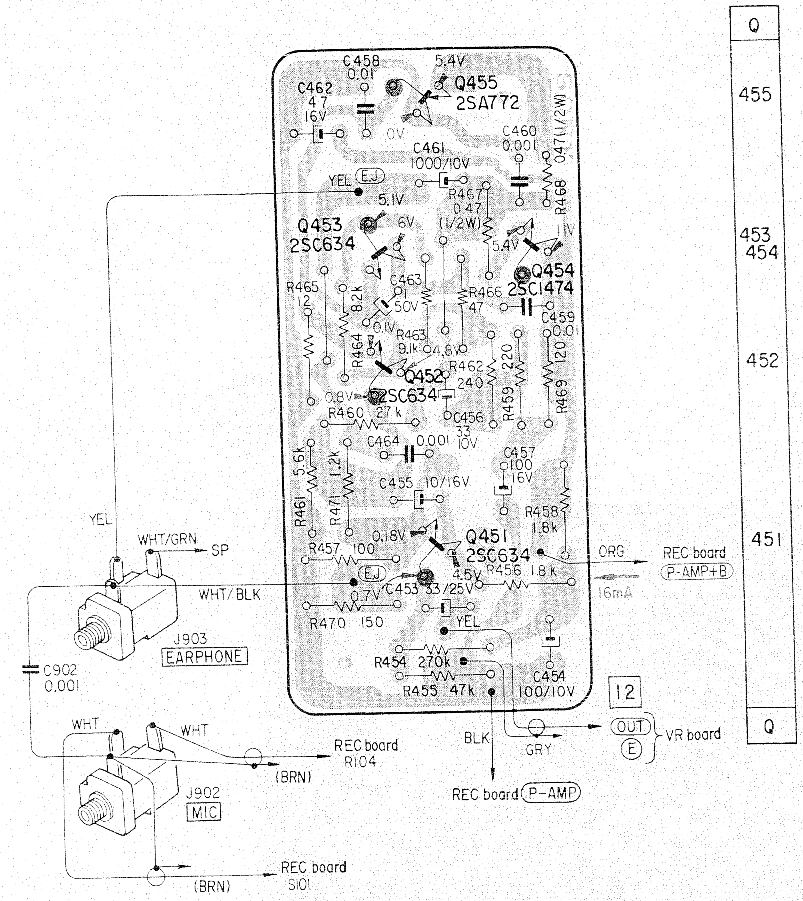
Note: ● ○—— : parts extracted from the component side.
● ●—— : parts extracted from the conductor side.
● Readings are taken under detuned conditions with VOM (20 kΩ/V).
〈 〉 : FM
( ) : AM

AUDIO

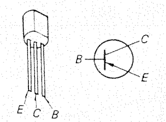
REC

VR

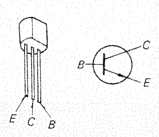
– AUDIO Board –


Q
455
453
454
452
451
Q
Q455 2SA772
Q453 2SC634
Q454 2SC1474
Q452 2SC634
Q451 2SC634
J903 EARPHONE
J902 MIC
C902 0.001
REC board P-AMP+B
REC board R104
REC board P-AMP
REC board S101
VR board
12

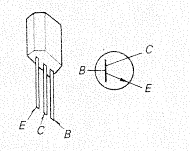
2SA772



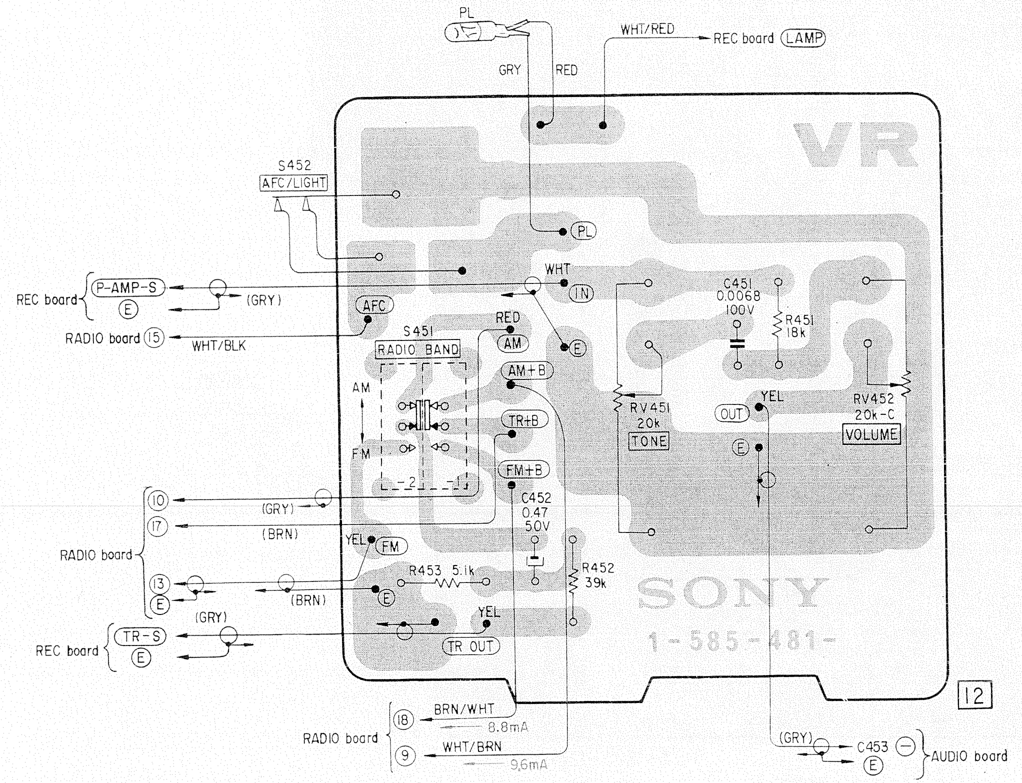
2SC1474



2SC634

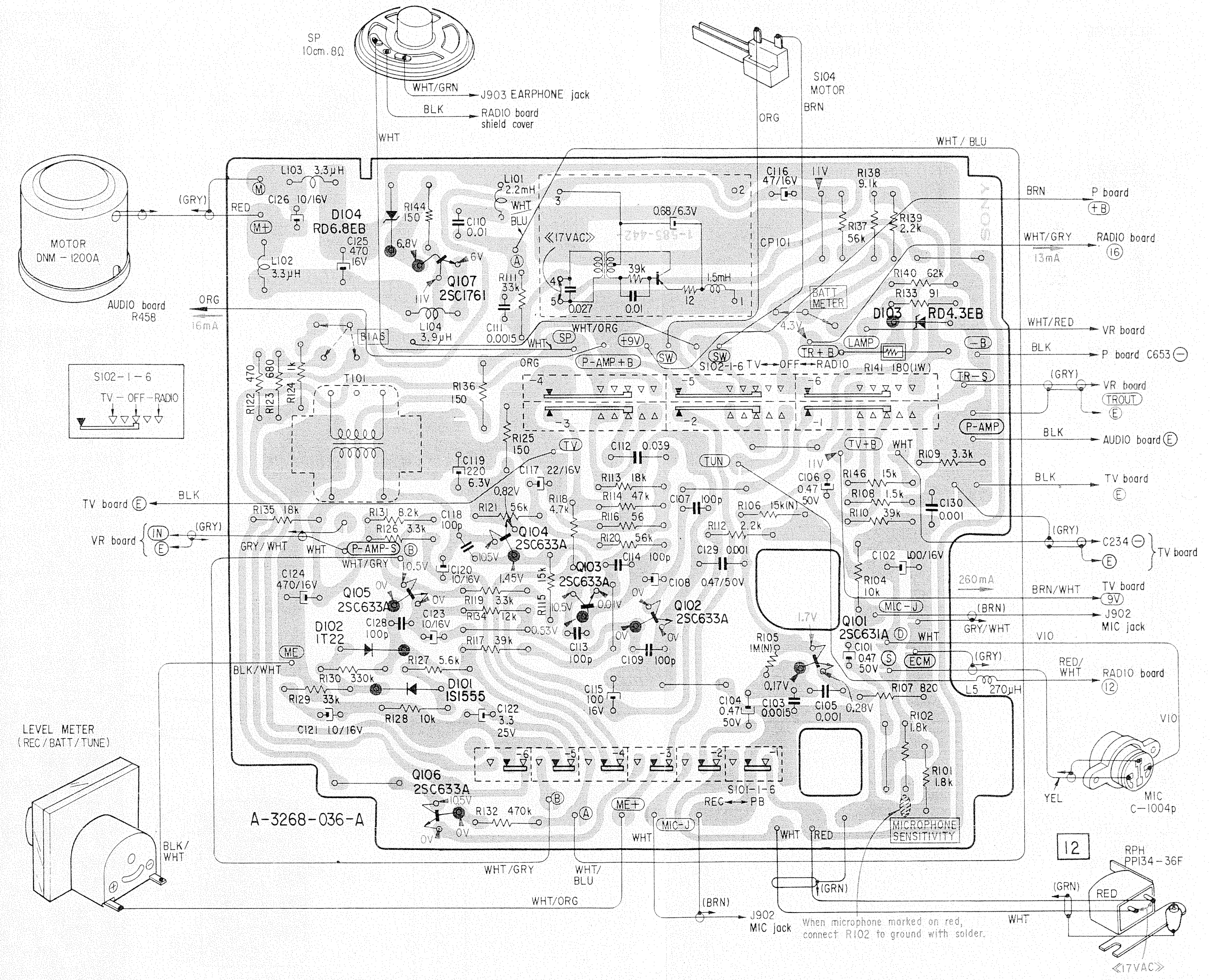


– VR Board –

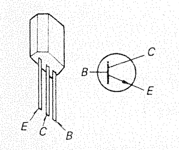

PL
REC board LAMP
S452 AFC/LIGHT
REC board P-AMP-S
RADIO board 15
S451 RADIO BAND
AM
FM
C451 0.0068 100V
R451 18k
RV451 20k TONE
RV452 20k-C VOLUME
C452 0.47 50V
R453 5.1k
R452 39k
RADIO board
REC board TR-S
RADIO board 18 9
AUDIO board C453
SONY 1-585-481-
12

– REC Board –

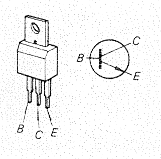
Q	105 106 107	104	103	102	101	Q
D	102 104 101				103	D


SP 10cm 8Ω
J903 EARPHONE jack
RADIO board shield cover
S104 MOTOR
MOTOR DNM-1200A
AUDIO board R456
S102-1-6 TV - OFF - RADIO
LEVEL METER (REC/BATT/TUNE)
A-3268-036-A
Q101 2SC631A
Q102 2SC633A
Q103 2SC633A
Q104 2SC633A
Q105 2SC633A
Q106 2SC633A
Q107 2SC1761
D101 IS1555
D102 IT22
D103 RD4.3EB
D104 RD6.8EB
S101-1-6 REC - PB
MICROPHONE SENSITIVITY
J902 MIC jack
When microphone marked on red, connect R102 to ground with solder.
MIC C-1004p
RPH PP134-36F
P board
RADIO board
VR board
TV board
AUDIO board
12

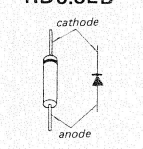
2SC631A
2SC633A



2SC1761



IS1555
IT22
RD4.3EB
RD6.8EB


cathode
anode

Note:
- ○——: parts extracted from the component side.
- ●——: parts extracted from the conductor side.
- (N): low-noise resistor
- Readings are taken under no signal conditions in playback mode with VOM (20 kΩ/V).

≪ ≫ : record mode

FX-310UW FX-310UW

ANT TV TV

– TV and ANT Boards –

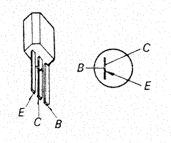
Note:

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.

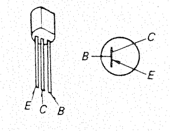
- Readings are taken under tuned conditions with CONTRAST and BRIGHT controls set for best picture.
  [ ] : detuned conditions

ADJ	RV601 RV552 C802 T202 R807 R808 T203 RV801	ADJ
Q	502 601 602 603 551 552 501 554 503 553 801 205 206 204 207 203 202 208 401 201 209	Q
D	553 502 552 501 804 551 204 801 805 803 802 203 202 806 201	D

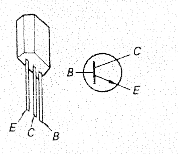
2SA678



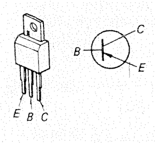
2SA772



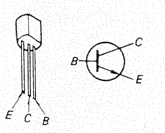
2SC633
2SC634



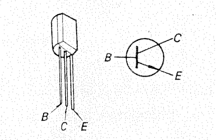
2SA835



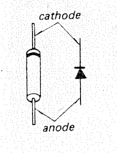
2SC1474
2SC1475



2SC710

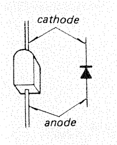


IS1555
IT22
RD4.3EB



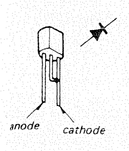
cathode
anode

HF1A
HF1Z

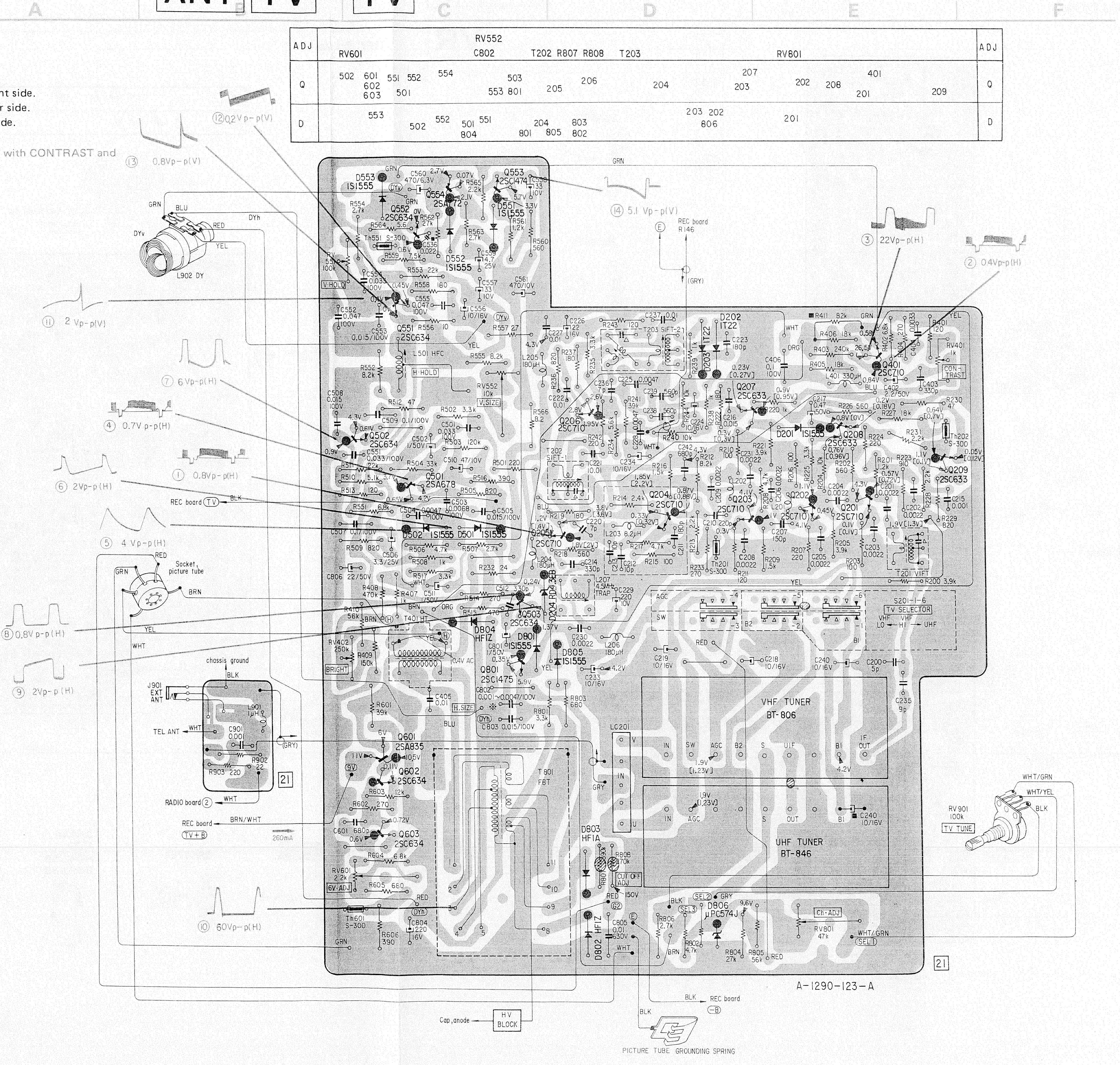


cathode
anode

μPC574J



anode
cathode



A
B
C
D
E
F
2
3
4
5
⑫ Q2Vp-p(V)
⑬ 0.8Vp-p(V)
⑪ 2 Vp-p(V)
⑦ 6Vp-p(H)
④ 0.7V p-p(H)
① 0.8Vp-p(H)
⑥ 2Vp-p(H)
⑤ 4 Vp-p(H)
⑧ 0.8V p-p(H)
⑨ 2Vp-p(H)
⑩ 60Vp-p(H)
⑭ 5.1 Vp-p(V)
③ 22Vp-p(H)
② 0.4Vp-p(H)
REC board R146
L902 DY
DYh
DYv
Socket, picture tube
chassis ground
J901 EXT ANT
TEL ANT
RADIO board ②
REC board TV+B
260mA
REC board TV
Cap, anode
HV BLOCK
PICTURE TUBE GROUNDING SPRING
REC board B
V.HOLD
H.HOLD
V.SIZE
H.SIZE
BRIGHT
6V ADJ
CUT OFF ADJ
CONTRAST
TV SELECTOR
VHF LO HI UHF
VHF TUNER BT-806
UHF TUNER BT-846
T801 FBT
RV901 100k TV TUNE
RV801 47k
Ch-ADJ
D553 IS1555
Q553 2SC1474
Q554 2SA772
Q552 2SC634
D551 IS1555
D552 IS1555
Q551 2SC634
L501 HFC
RV552 10k
Q502 2SC634
Q501 2SA678
D502 IS1555
D501 IS1555
Q503 2SC634
D804 HF1Z
D801 IS1555
D805 IS1555
Q801 2SC1475
Q601 2SA835
Q602 2SC634
Q603 2SC634
RV601
D803 HF1A
D802 HF1Z
D806 μPC574J
D202 IT22
Q207 2SC633
Q206 2SC710
Q205 2SC710
Q204 2SC710
Q203
Q202 2SC710
Q201 2SC710
D201 IS1555
Q208 2SC633
Q209 2SC633
Q401 2SC710
D204 RD4.3EB
T202 SIFT-1
T203 SIFT-2
T201 VIFT
S201-1-6
LC201
A-1290-123-A
21

Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

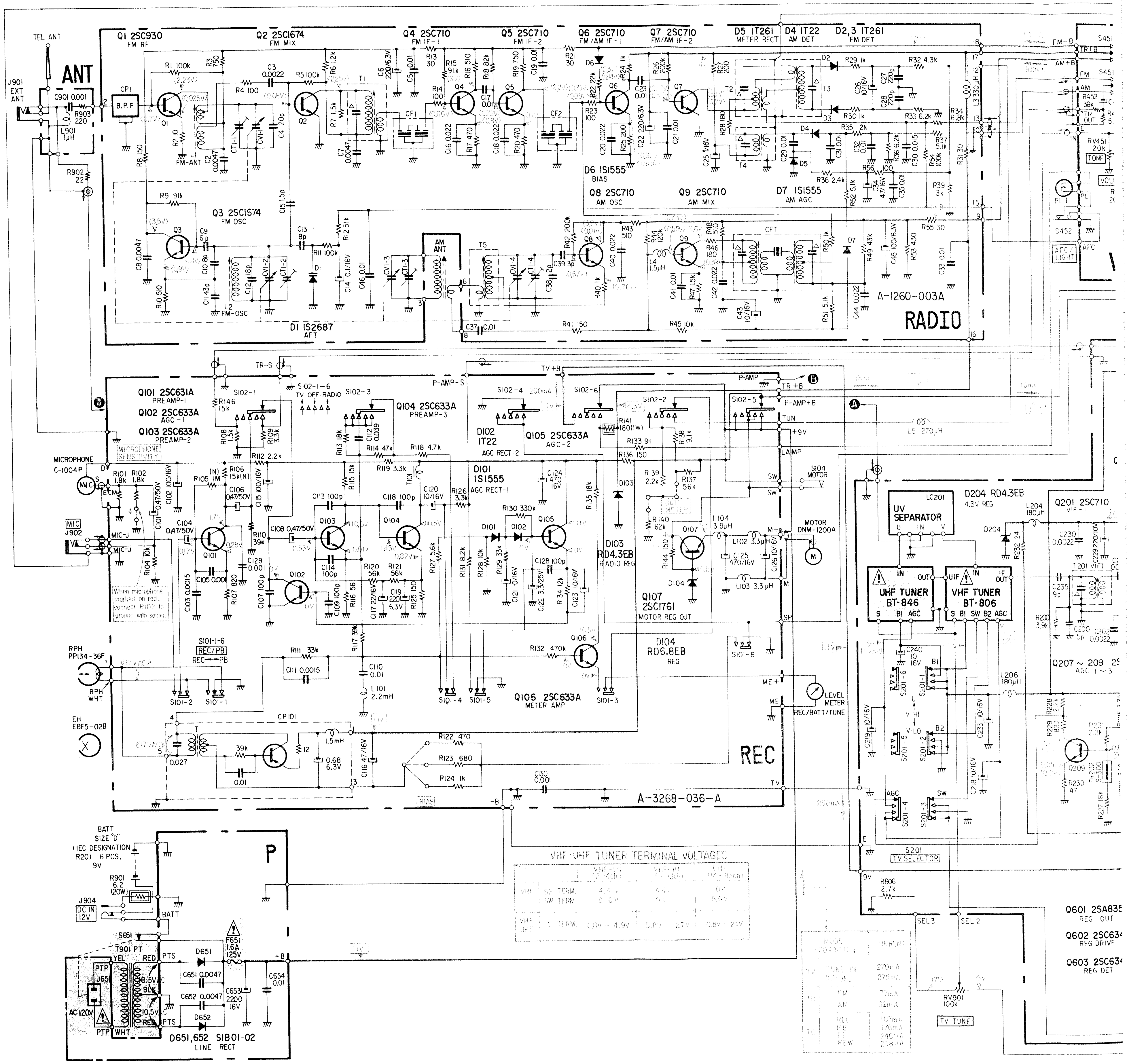
4-4. SCHEMATIC DIAGRAM

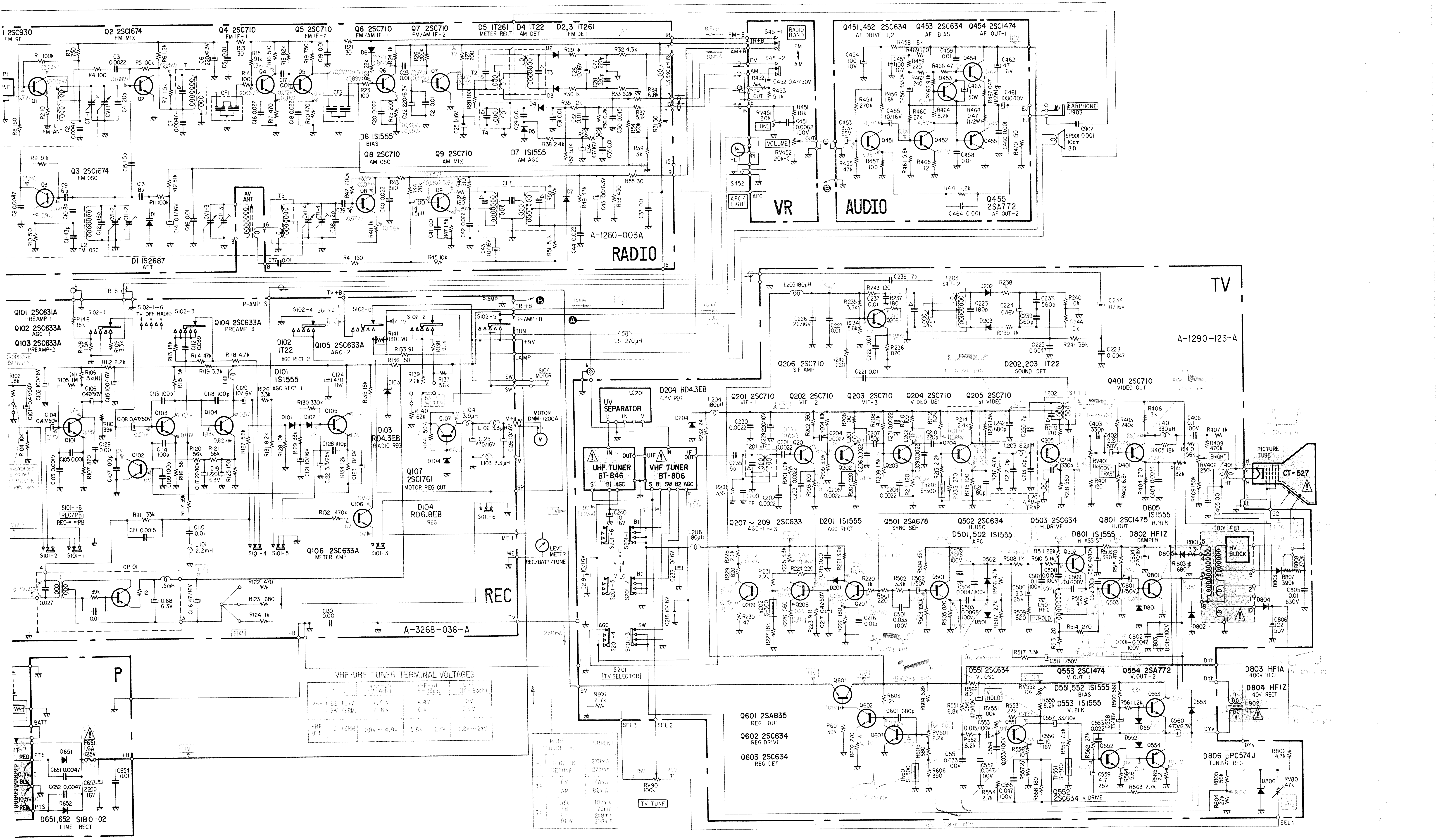
- All capacitors are in μF unless otherwise noted. pF = $\mu\mu$F 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000kΩ.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation.
- Switch

Ref. No.	Switch	Position
S101-1-6	REC/PB	PB
S102-1-6	TV/RADIO POWER	OFF
S201-1-6	TV SELECTOR	V-LO
S451-1, 2	RADIO BAND	AM
S452	AFC/LIGHT	ON/OFF
S651	AC/DC	DC

- In using an electret condenser microphone with a red mark on the side of the case connect R102 shown by * in parallel with R101.
- ※ : selected to yield optimum performance.
- ━━ : B + bus.
- ▭ : adjustment for repair.
- Voltage variations may be noted due to normal production tolerances.

- Voltages are dc with respect to ground unless otherwise noted.
- All voltages are measured with the ac-power operated.
- Readings are taken with a 20,000-ohm-per-volt VOM.
- Voltages in the TV board are taken under tuned conditions with CONTRAST and BRIGHT controls set for best picture
  [ ] : detuned conditions
- Voltages in the RADIO board are taken under detuned conditions
  〈 〉 : FM
  ( ) : AM
- Voltages in the REC board are taken under no-signal conditions in playback mode.
  ≪ ≫ : record mode
- Currents are taken under detuned or no signal conditions.


TEL ANT
J901 EXT ANT
ANT
Q1 2SC930 FM RF
Q2 2SC1674 FM MIX
Q3 2SC1674 FM OSC
Q4 2SC710 FM IF-1
Q5 2SC710 FM IF-2
Q6 2SC710 FM/AM IF-1
Q7 2SC710 FM/AM IF-2
Q8 2SC710 AM OSC
Q9 2SC710 AM MIX
D1 1S2687 AFT
D5 1T261 METER RECT
D4 1T22 AM DET
D2,3 1T261 FM DET
D6 1S1555 BIAS
D7 1S1555 AM AGC
B.P.F
A-1260-003A
RADIO
AM ANT
Q101 2SC631A PREAMP-1
Q102 2SC633A AGC-1
Q103 2SC633A PREAMP-2
Q104 2SC633A PREAMP-3
Q105 2SC633A AGC-2
Q106 2SC633A METER AMP
Q107 2SC1761 MOTOR REG OUT
D101 1S1555 AGC RECT-1
D102 1T22 AGC RECT-2
D103 RD4.3EB RADIO REG
D104 RD6.8EB REG
MICROPHONE C-1004P
MIC J902
RPH PP134-36F
EH EBF5-02B
CP101
MOTOR DNM-1200A
LEVEL METER REC/BATT/TUNE
A-3268-036-A
REC
BATT SIZE "D" (IEC DESIGNATION R20) 6 PCS. 9V
J904 DC IN 12V
S651
T901 PT
F651 1.6A 125V
AC 120V
D651,652 SIB01-02 LINE RECT
P
LC201 UV SEPARATOR
D204 RD4.3EB 4.3V REG
Q201 2SC710 VIF-1
UHF TUNER BT-846
VHF TUNER BT-806
S201 TV SELECTOR
Q207 ~ 209 AGC-1~3
VHF·UHF TUNER TERMINAL VOLTAGES
RV901 100k
TV TUNE
SEL 3
SEL 2
Q601 2SA835 REG OUT
Q602 2SC634 REG DRIVE
Q603 2SC634 REG DET
R451 20k TONE
S452 AFC LIGHT
PL1


RADIO
A-1260-003A
Q2 2SC1674 FM MIX
Q3 2SC1674 FM OSC
Q4 2SC710 FM IF-1
Q5 2SC710 FM IF-2
Q6 2SC710 FM/AM IF-1
Q7 2SC710 FM/AM IF-2
Q8 2SC710 AM OSC
Q9 2SC710 AM MIX
D1 1S2687 AFT
D2,3 1T261 FM DET
D4 1T22 AM DET
D5 1T261 METER RECT
D6 1S1555 BIAS
D7 1S1555 AM AGC
AM ANT
FM-ANT
FM-OSC
VR
VOLUME
TONE
RADIO BAND
FM
AM
AFC LIGHT
AUDIO
Q451,452 2SC634 AF DRIVE-1,2
Q453 2SC634 AF BIAS
Q454 2SC1474 AF OUT-1
Q455 2SA772 AF OUT-2
EARPHONE J903
SP901 10cm 8Ω
REC
A-3268-036-A
Q101 2SC631A PREAMP-1
Q102 2SC633A AGC-1
Q103 2SC633A PREAMP-2
Q104 2SC633A PREAMP-3
Q105 2SC633A AGC-2
Q106 2SC633A METER AMP
Q107 2SC1761 MOTOR REG OUT
D101 1S1555 AGC RECT-1
D102 1T22 AGC RECT-2
D103 RD4.3EB RADIO REG
D104 RD6.8EB REG
MOTOR DNM-1200A
LEVEL METER REC/BATT/TUNE
TV-OFF-RADIO
REC/PB
P
D651,652 S1B01-02 LINE RECT
F651 1.6A 125V
BATT
UV SEPARATOR
D204 RD4.3EB 4.3V REG
UHF TUNER BT-846
VHF TUNER BT-806
S201 TV SELECTOR
TV TUNE
RV901 100k
TV
A-1290-123-A
Q201 2SC710 VIF-1
Q202 2SC710 VIF-2
Q203 2SC710 VIF-3
Q204 2SC710 VIDEO DET
Q205 2SC710 1st VIDEO
Q206 2SC710 SIF AMP
D202,203 1T22 SOUND DET
Q401 2SC710 VIDEO OUT
Q207~209 2SC633 AGC-1~3
D201 1S1555 AGC RECT
Q501 2SA678 SYNC SEP
Q502 2SC634 H.OSC
D501,502 1S1555 AFC
Q503 2SC634 H.DRIVE
Q801 2SC1475 H.OUT
D801 1S1555 H.ASSIST
D802 HF1Z DAMPER
D805 1S1555 H.BLK
T801 FBT
HV BLOCK
PICTURE TUBE
CT-527
BRIGHT
CONTRAST
H.HOLD
V.HOLD
Q551 2SC634 V.OSC
Q552 2SC634 V.DRIVE
Q553 2SC1474 V.OUT-1
Q554 2SA772 V.OUT-2
D551,552 1S1555 BIAS
D553 1S1555 V.BLK
Q601 2SA835 REG OUT
Q602 2SC634 REG DRIVE
Q603 2SC634 REG DET
D803 HF1A 400V RECT
D804 HF1Z 40V RECT
D806 μPC574J TUNING REG
SEL1
SEL2
SEL3

VHF·UHF TUNER TERMINAL VOLTAGES

		VHF-LO (2-4ch)	VHF-HI (5-13ch)	UHF (14-83ch)
VHF	B2 TERM.	4.4 V	4.4V	0V
	SW TERM.	9.6V	0V	9.6V
VHF UHF	C TERM.	0.8V - 4.9V	5.8V - 27V	0.8V - 24V

MODE (CONDITION)		CURRENT
TV	TUNE IN	270mA
	DETUNE	275mA
TR	FM	77mA
	AM	82mA
TC	REC	187mA
	PB	176mA
	FF	248mA
	REW	208mA

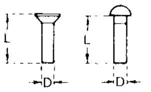
1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-244-601-11	10	1-244-625-11	100	1-244-649-11	1.0k	1-244-673-11	10k	1-244-697-11	100k	1-244-721-11	1.0M	1-244-745-11
1.1	1-244-602-11	11	1-244-626-11	110	1-244-650-11	1.1k	1-244-674-11	11k	1-244-698-11	110k	1-244-722-11	1.1M	1-244-746-11
1.2	1-244-603-11	12	1-244-627-11	120	1-244-651-11	1.2k	1-244-675-11	12k	1-244-699-11	120k	1-244-723-11	1.2M	1-244-747-11
1.3	1-244-604-11	13	1-244-628-11	130	1-244-652-11	1.3k	1-244-676-11	13k	1-244-700-11	130k	1-244-724-11	1.3M	1-244-748-11
1.5	1-244-605-11	15	1-244-629-11	150	1-244-653-11	1.5k	1-244-677-11	15k	1-244-701-11	150k	1-244-725-11	1.5M	1-244-749-11
1.6	1-244-606-11	16	1-244-630-11	160	1-244-654-11	1.6k	1-244-678-11	16k	1-244-702-11	160k	1-244-726-11	1.6M	1-244-750-11
1.8	1-244-607-11	18	1-244-631-11	180	1-244-655-11	1.8k	1-244-679-11	18k	1-244-703-11	180k	1-244-737-11	1.8M	1-244-751-11
2.0	1-244-608-11	20	1-244-632-11	200	1-244-656-11	2.0k	1-244-680-11	20k	1-244-704-11	200k	1-244-728-11	2.0M	1-244-752-11
2.2	1-244-609-11	22	1-244-633-11	220	1-244-657-11	2.2k	1-244-681-11	22k	1-244-705-11	220k	1-244-729-11	2.2M	1-244-753-11
2.4	1-244-610-11	24	1-244-634-11	240	1-244-658-11	2.4k	1-244-682-11	24k	1-244-706-11	240k	1-244-730-11	2.4M	1-244-754-11
2.7	1-244-611-11	27	1-244-635-11	270	1-244-659-11	2.7k	1-244-683-11	27k	1-244-707-11	270k	1-244-731-11	2.7M	1-244-755-11
3.0	1-244-612-11	30	1-244-636-11	300	1-244-660-11	3.0k	1-244-684-11	30k	1-244-708-11	300k	1-244-732-11	3.0M	1-244-756-11
3.3	1-244-613-11	33	1-244-637-11	330	1-244-661-11	3.3k	1-244-685-11	33k	1-244-709-11	330k	1-244-733-11	3.3M	1-244-757-11
3.6	1-244-614-11	36	1-244-638-11	360	1-244-662-11	3.6k	1-244-686-11	36k	1-244-710-11	360k	1-244-734-11	3.6M	1-244-758-11
3.9	1-244-615-11	39	1-244-639-11	390	1-244-663-11	3.9k	1-244-687-11	39k	1-244-711-11	390k	1-244-735-11	3.9M	1-244-759-11
4.3	1-244-616-11	43	1-244-640-11	430	1-244-664-11	4.3k	1-244-688-11	43k	1-244-712-11	430k	1-244-736-11	4.3M	1-244-760-11
4.7	1-244-617-11	47	1-244-641-11	470	1-244-665-11	4.7k	1-244-689-11	47k	1-244-713-11	470k	1-244-737-11	4.7M	1-244-761-11
5.1	1-244-618-11	51	1-244-642-11	510	1-244-666-11	5.1k	1-244-690-11	51k	1-244-714-11	510k	1-244-738-11	5.1M	1-244-762-11
5.6	1-244-619-11	56	1-244-643-11	560	1-244-667-11	5.6k	1-244-691-11	56k	1-244-715-11	560k	1-244-739-11		
6.2	1-244-620-11	62	1-244-644-11	620	1-244-668-11	6.2k	1-244-692-11	62k	1-244-716-11	620k	1-244-740-11		
6.8	1-244-621-11	68	1-244-645-11	680	1-244-669-11	6.8k	1-244-693-11	68k	1-244-717-11	680k	1-244-741-11		
7.5	1-244-622-11	75	1-244-646-11	750	1-244-670-11	7.5k	1-244-694-11	75k	1-244-718-11	750k	1-244-742-11		
8.2	1-244-623-11	82	1-244-647-11	820	1-244-671-11	8.2k	1-244-695-11	82k	1-244-719-11	820k	1-244-743-11		
9.1	1-244-624-11	91	1-244-648-11	910	1-244-672-11	9.1k	1-244-696-11	91k	1-244-720-11	910k	1-244-744-11		

HARDWARE NOMENCLATURE

Screw:

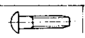
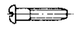
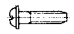
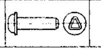
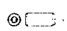
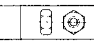
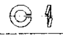
– P 3 x 10
L: Length in mm
D: Diameter in mm
Type of head
Indicated slotted-head only.
Unless otherwise indicated, it means
cross-recessed head (Phillips type).



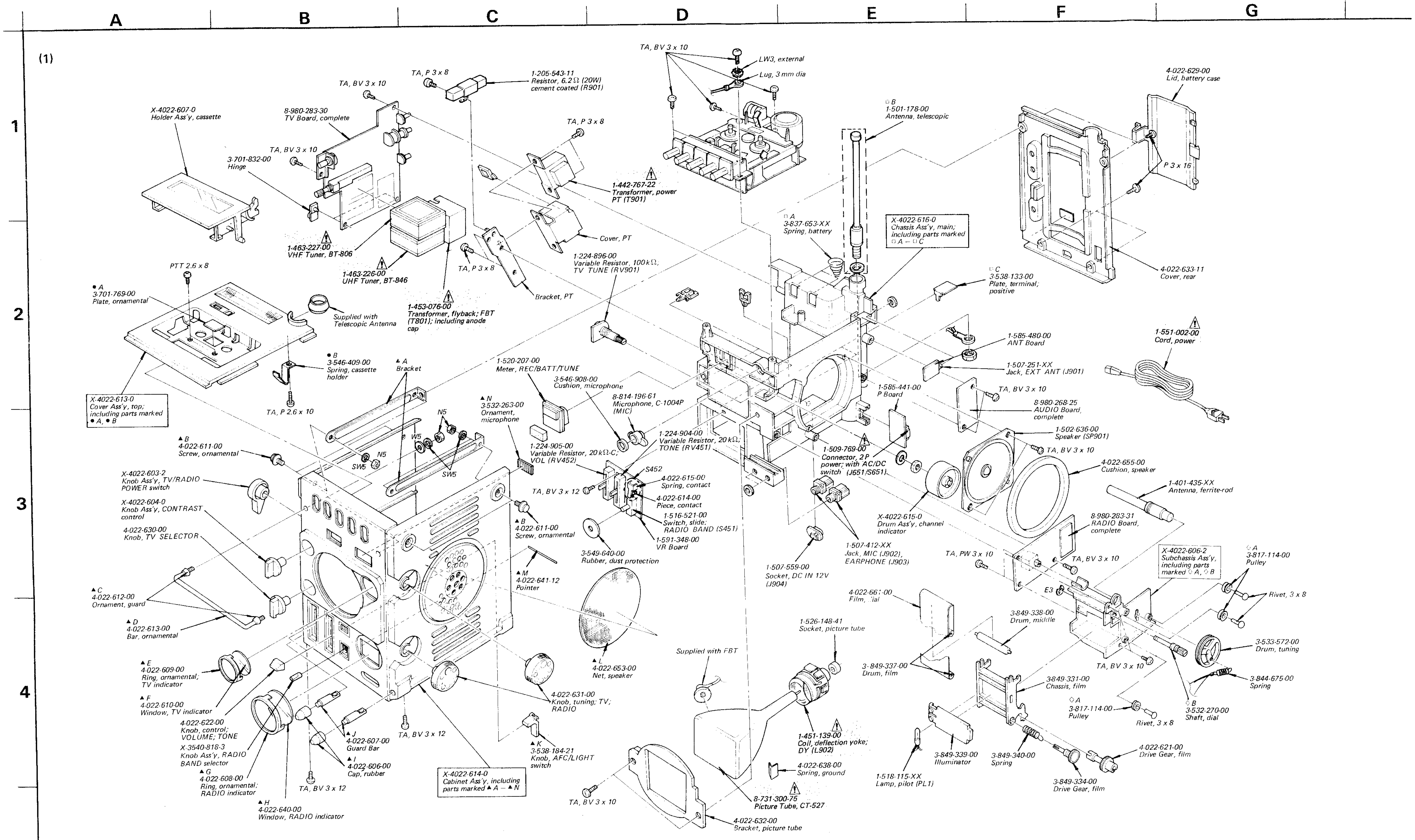
Nut, Washer, Retaining ring:

N 3
Diameter of usable screw or shaft
Reference designation

Reference Designation	Shape	Description	Remarks
		SCREWS	
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
		SELF-TAPPING SCREWS	
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N		nut	
		WASHERS	
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E		retaining ring	
G		grip-type retaining ring	

SECTION 5
EXPLODED VIEWS

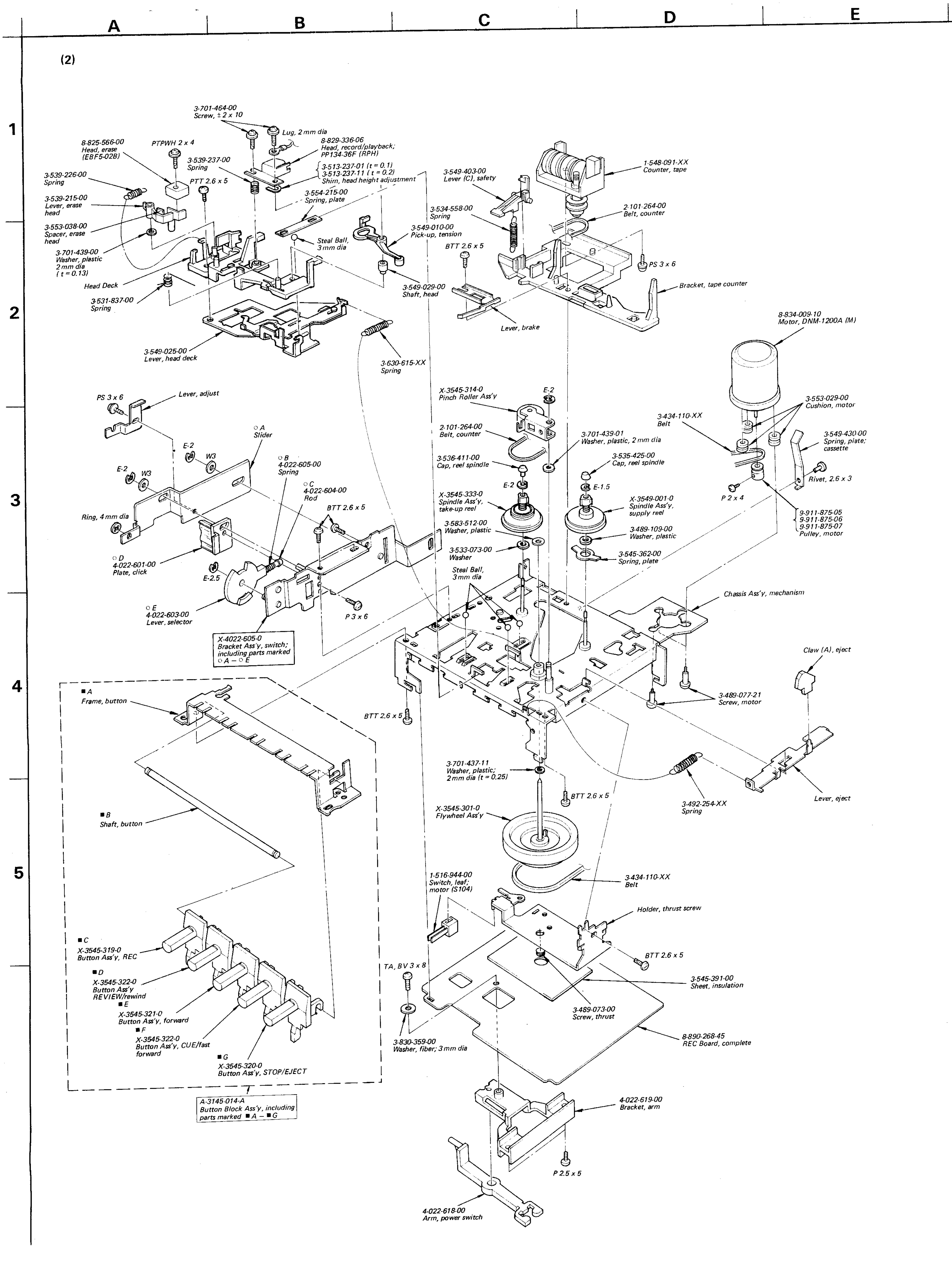

A
B
C
D
E
F
G
1
2
3
4
5
(1)
X-4022-607-0
Holder Ass'y, cassette
TA, BV 3 x 10
8-980-283-30
TV Board, complete
TA, P 3 x 8
1-205-543-11
Resistor, 6.2Ω (20W)
cement coated (R901)
TA, BV 3 x 10
3-701-832-00
Hinge
TA, P 3 x 8
1-442-767-22
Transformer, power
PT (T901)
1-463-227-00
VHF Tuner, BT-806
1-463-226-00
UHF Tuner, BT-846
TA, P 3 x 8
Cover, PT
1-453-076-00
Transformer, flyback; FBT
(T801); including anode
cap
Bracket, PT
1-224-896-00
Variable Resistor, 100kΩ;
TV TUNE (RV901)
PTT 2.6 x 8
● A
3-701-769-00
Plate, ornamental
Supplied with
Telescopic Antenna
● B
3-546-409-00
Spring, cassette
holder
▲ A
Bracket
X-4022-613-0
Cover Ass'y, top;
including parts marked
● A, ● B
TA, P 2.6 x 10
TA, BV 3 x 10
LW3, external
Lug, 3 mm dia
□ B
1-501-178-00
Antenna, telescopic
4-022-629-00
Lid, battery case
P 3 x 16
□ A
3-837-653-XX
Spring, battery
X-4022-616-0
Chassis Ass'y, main;
including parts marked
□ A – □ C
□ C
3-538-133-00
Plate, terminal;
positive
4-022-633-11
Cover, rear
1-551-002-00
Cord, power
1-585-480-00
ANT Board
1-507-251-XX
Jack, EXT ANT (J901)
TA, BV 3 x 10
8-980-268-25
AUDIO Board,
complete
1-520-207-00
Meter, REC/BATT/TUNE
3-546-908-00
Cushion, microphone
8-814-196-61
Microphone, C-1004P
(MIC)
▲ N
3-532-263-00
Ornament,
microphone
N5
W5
N5
SW5
SW5
1-224-905-00
Variable Resistor, 20kΩ-C;
VOL (RV452)
1-224-904-00
Variable Resistor, 20kΩ;
TONE (RV451)
S452
4-022-615-00
Spring, contact
4-022-614-00
Piece, contact
1-516-521-00
Switch, slide;
RADIO BAND (S451)
1-591-348-00
VR Board
1-585-441-00
P Board
1-509-769-00
Connector, 2P
power; with AC/DC
switch (J651/S651)
1-502-636-00
Speaker (SP901)
TA, BV 3 x 10
4-022-655-00
Cushion, speaker
1-401-435-XX
Antenna, ferrite-rod
▲ B
4-022-611-00
Screw, ornamental
X-4022-603-2
Knob Ass'y, TV/RADIO
POWER switch
X-4022-604-0
Knob Ass'y, CONTRAST
control
4-022-630-00
Knob, TV SELECTOR
TA, BV 3 x 12
▲ B
4-022-611-00
Screw, ornamental
3-549-640-00
Rubber, dust protection
X-4022-615-0
Drum Ass'y, channel
indicator
1-507-412-XX
Jack, MIC (J902),
EARPHONE (J903)
1-507-559-00
Socket, DC IN 12V
(J904)
8-980-283-31
RADIO Board,
complete
TA, PW 3 x 10
TA, BV 3 x 10
X-4022-606-2
Subchassis Ass'y,
including parts
marked ◇ A, ◇ B
◇ A
3-817-114-00
Pulley
Rivet, 3 x 8
E3
▲ C
4-022-612-00
Ornament, guard
▲ D
4-022-613-00
Bar, ornamental
▲ M
4-022-641-12
Pointer
4-022-661-00
Film, dial
3-849-338-00
Drum, middle
1-526-148-41
Socket, picture tube
Supplied with FBT
3-849-337-00
Drum, film
3-533-572-00
Drum, tuning
TA, BV 3 x 10
3-844-675-00
Spring
▲ E
4-022-609-00
Ring, ornamental;
TV indicator
▲ L
4-022-653-00
Net, speaker
3-849-331-00
Chassis, film
◇ A
3-817-114-00
Pulley
Rivet, 3 x 8
◇ B
3-532-270-00
Shaft, dial
▲ F
4-022-610-00
Window, TV indicator
4-022-631-00
Knob, tuning; TV;
RADIO
4-022-622-00
Knob, control;
VOLUME; TONE
X-3540-818-3
Knob Ass'y, RADIO
BAND selector
▲ J
4-022-607-00
Guard Bar
TA, BV 3 x 12
▲ K
3-538-184-21
Knob, AFC/LIGHT
switch
1-451-139-00
Coil, deflection yoke;
DY (L902)
4-022-621-00
Drive Gear, film
▲ I
4-022-606-00
Cap, rubber
▲ G
4-022-608-00
Ring, ornamental;
RADIO indicator
TA, BV 3 x 12
X-4022-614-0
Cabinet Ass'y, including
parts marked ▲ A – ▲ N
4-022-638-00
Spring, ground
3-849-339-00
Illuminator
3-849-340-00
Spring
1-518-115-XX
Lamp, pilot (PL1)
3-849-334-00
Drive Gear, film
▲ H
4-022-640-00
Window, RADIO indicator
TA, BV 3 x 10
8-731-300-75
Picture Tube, CT-527
4-022-632-00
Bracket, picture tube

Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- (□T) shows the number of coils in spring.

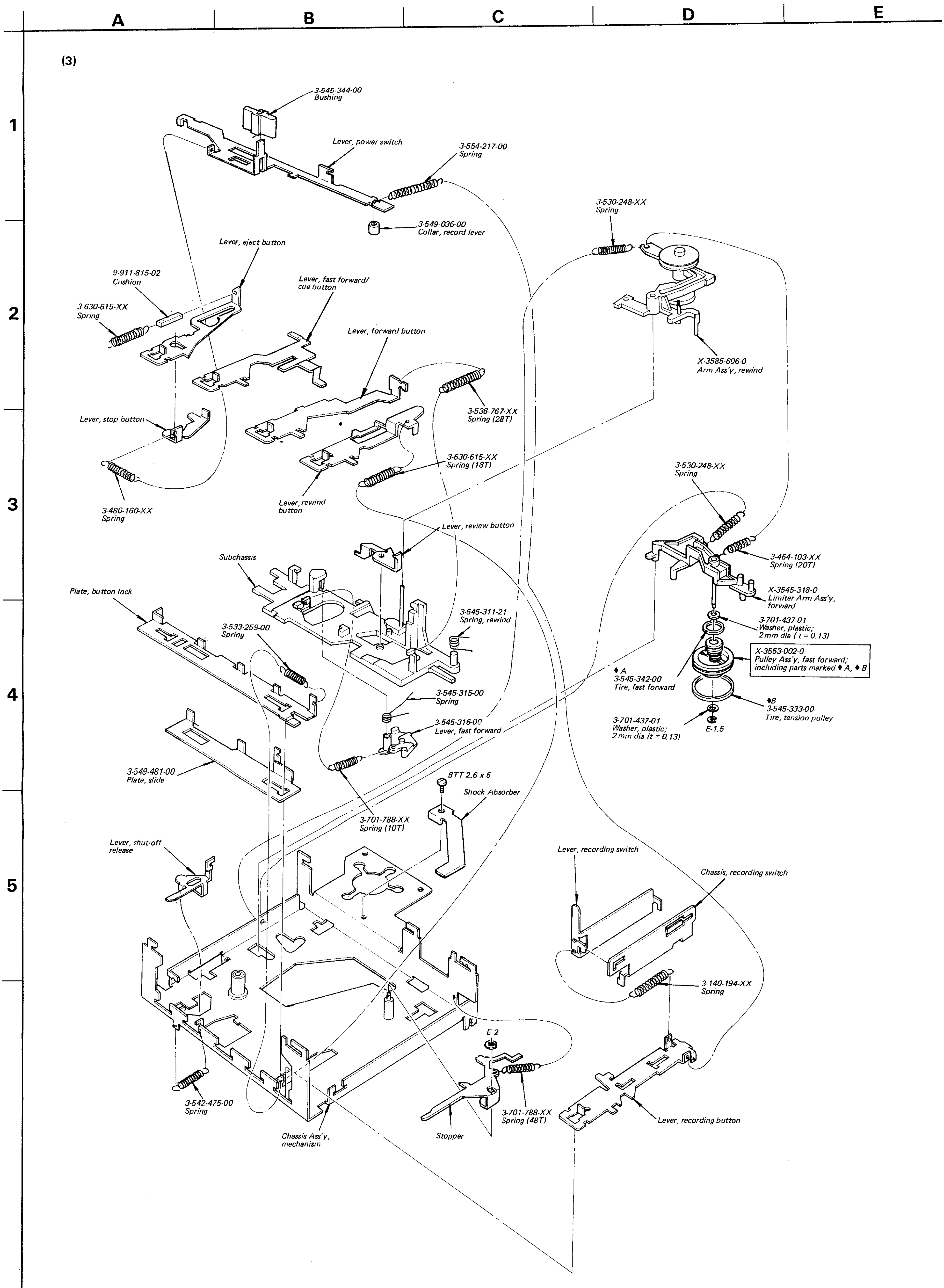
(2)


A
B
C
D
E
1
2
3
4
5
3-701-464-00
Screw, ± 2 x 10
Lug, 2 mm dia
8-829-336-06
Head, record/playback;
PP134-36F (RPH)
8-825-566-00
Head, erase
(EBF5-02B)
PTPWH 2 x 4
3-539-237-00
Spring
3-513-237-01 (t = 0.1)
3-513-237-11 (t = 0.2)
Shim, head height adjustment
3-539-226-00
Spring
PTT 2.6 x 5
3-554-215-00
Spring, plate
3-539-215-00
Lever, erase
head
3-553-038-00
Spacer, erase
head
3-701-439-00
Washer, plastic
2 mm dia
(t = 0.13)
Steal Ball,
3 mm dia
Head Deck
3-531-837-00
Spring
3-549-025-00
Lever, head deck
3-630-615-XX
Spring
3-549-403-00
Lever (C), safety
3-534-558-00
Spring
3-549-010-00
Pick-up, tension
BTT 2.6 x 5
3-549-029-00
Shaft, head
Lever, brake
1-548-091-XX
Counter, tape
2-101-264-00
Belt, counter
PS 3 x 6
Bracket, tape counter
8-834-009-10
Motor, DNM-1200A (M)
3-553-029-00
Cushion, motor
3-434-110-XX
Belt
3-549-430-00
Spring, plate;
cassette
Rivet, 2.6 x 3
P 2 x 4
9-911-875-05
9-911-875-06
9-911-875-07
Pulley, motor
PS 3 x 6
Lever, adjust
○ A
Slider
E-2
W3
E-2
W3
○ B
4-022-605-00
Spring
○ C
4-022-604-00
Rod
BTT 2.6 x 5
Ring, 4 mm dia
○ D
4-022-601-00
Plate, click
E-2.5
○ E
4-022-603-00
Lever, selector
P 3 x 6
X-4022-605-0
Bracket Ass'y, switch;
including parts marked
○ A – ○ E
X-3545-314-0
Pinch Roller Ass'y
E-2
2-101-264-00
Belt, counter
3-701-439-01
Washer, plastic, 2 mm dia
3-536-411-00
Cap, reel spindle
3-535-425-00
Cap, reel spindle
E-2
E-1.5
X-3545-333-0
Spindle Ass'y,
take-up reel
X-3549-001-0
Spindle Ass'y,
supply reel
3-583-512-00
Washer, plastic
3-489-109-00
Washer, plastic
3-533-073-00
Washer
3-545-362-00
Spring, plate
Steal Ball,
3 mm dia
Chassis Ass'y, mechanism
Claw (A), eject
3-489-077-21
Screw, motor
BTT 2.6 x 5
3-701-437-11
Washer, plastic;
2 mm dia (t = 0.25)
BTT 2.6 x 5
3-492-254-XX
Spring
Lever, eject
X-3545-301-0
Flywheel Ass'y
■ A
Frame, button
■ B
Shaft, button
1-516-944-00
Switch, leaf;
motor (S104)
3-434-110-XX
Belt
Holder, thrust screw
BTT 2.6 x 5
TA, BV 3 x 8
3-545-391-00
Sheet, insulation
3-489-073-00
Screw, thrust
3-830-359-00
Washer, fiber; 3 mm dia
8-890-268-45
REC Board, complete
■ C
X-3545-319-0
Button Ass'y, REC
■ D
X-3545-322-0
Button Ass'y
REVIEW/rewind
■ E
X-3545-321-0
Button Ass'y, forward
■ F
X-3545-322-0
Button Ass'y, CUE/fast
forward
■ G
X-3545-320-0
Button Ass'y, STOP/EJECT
A-3145-014-A
Button Block Ass'y, including
parts marked ■ A – ■ G
4-022-619-00
Bracket, arm
P 2.5 x 5
4-022-618-00
Arm, power switch

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- (□□T) shows the number of coils in spring.

(3)


A
B
C
D
E
1
2
3
4
5
3-545-344-00 Bushing
Lever, power switch
3-554-217-00 Spring
3-549-036-00 Collar, record lever
Lever, eject button
9-911-815-02 Cushion
3-630-615-XX Spring
Lever, fast forward/ cue button
Lever, forward button
Lever, stop button
3-536-767-XX Spring (28T)
3-630-615-XX Spring (18T)
Lever, rewind button
3-480-160-XX Spring
3-530-248-XX Spring
X-3585-606-0 Arm Ass'y, rewind
Lever, review button
Subchassis
Plate, button lock
3-533-259-00 Spring
3-545-311-21 Spring, rewind
3-545-315-00 Spring
3-545-316-00 Lever, fast forward
3-549-481-00 Plate, slide
3-701-788-XX Spring (10T)
BTT 2.6 x 5
Shock Absorber
3-530-248-XX Spring
3-464-103-XX Spring (20T)
X-3545-318-0 Limiter Arm Ass'y, forward
3-701-437-01 Washer, plastic; 2mm dia (t = 0.13)
X-3553-002-0 Pulley Ass'y, fast forward; including parts marked ♦ A, ♦ B
♦ A 3-545-342-00 Tire, fast forward
♦ B 3-545-333-00 Tire, tension pulley
3-701-437-01 Washer, plastic; 2mm dia (t = 0.13)
E-1.5
Lever, shut-off release
Lever, recording switch
Chassis, recording switch
3-140-194-XX Spring
E-2
3-542-475-00 Spring
Chassis Ass'y, mechanism
Stopper
3-701-788-XX Spring (48T)
Lever, recording button

Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted
  (–) = slotted head
- (□□ T) shows the number of coils in spring.

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	*Part No.*	*Description*
TUNERS AND CIRCUIT BOARDS		
	⚠1-463-226-00	UHF Tuner, BT-846
	⚠1-463-227-00	VHF Tuner, BT-806
	1-585-441-00	P Board
	1-585-480-00	ANT Board
	1-591-348-00	VR Board
	8-980-268-25	AUDIO Board, complete
	8-980-268-45	REC Board, complete
	8-980-283-30	TV Board, complete
	8-980-283-31	RADIO Board, complete
SEMICONDUCTORS		
Transistors		
Q1		2SC930
Q2,3		2SC1674
Q4-9		2SC710
Q101		2SC631A
Q102-106		2SC633A
Q107		2SC1761
Q201-206		2SC710
Q207-209		2SC633A
Q401		2SC710
Q451-453		2SC634
Q454		2SC1474
Q455		2SA772
Q501		2SA678
Q502,503		2SC634
Q551,552		
Q553		2SC1474
Q554		2SA772
Q601		2SA835
Q602,603		2SC634A
Q801		2SC1475
Diodes		
D1		1S2687
D2,3		1T261
D4		1T22
D5		1T261
D6,7		1S1555

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Ref. No.	*Part No.*	*Description*
D101		1S1555
D102		1T22
D103		RD4. 3EB
D104		RD6. 8EB
D201		1S1555
D202,203		1T22
D204		RD4. 3EB
D501,502		1S1555
D551-553		
D651,652		SIB01-02
D801		1S1555
D802		HF1Z
D803		HF1A
D804		HF1Z
D805		1S1555
D806		μPC574J
Miscellaneous		
⇒ Th201,202	1-800-071-XX	Thermistor, TH-350
⇒ Th551,601		
COILS		
All coils are microinductors unless otherwise noted.		
L1	1-425-632-00	FM Antenna
L2	1-405-705-00	FM Oscillation
L3	1-407-175-XX	330μH
L4	1-407-180-XX	1.5μH
L5	1-407-174-XX	270μH
L101	1-407-198-XX	2.2mH
L102,103	1-407-184-XX	3.3μH
L104	1-407-688-00	3.9μH
L201	1-425-973-00	VIF
L202	1-425-974-00	VIF
L203	1-407-189-XX	8.2μH
L204-206	1-407-172-XX	180μH
L207	1-407-179-00	4.5MHz Trap
L401	1-407-175-XX	330μH
L501	1-435-053-00	Horizontal Frequency, HFC, H.HOL
L901	1-407-178-XX	1μH
L902	⚠1-451-139-00	Deflection Yoke, DY

Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

TRANSFORMERS AND FILTERS

Ref. No.	*Part No.*	*Description*
CF1,2	1-527-184-XX	Ceramic Filter
CFT	1-403-144-00	AM IFT
CP1	1-231-286-00	Bandpass Filter
CP101	1-464-007-00	Bias Oscillation Unit
LC201	1-417-060-00	UV Separator
T1	1-403-872-00	FM IFT
T2	1-403-952-00	FM Discriminator, primary
T3	1-403-953-00	FM Discriminator, secondary
T4	1-404-041-00	AM Detect
T5	1-405-655-00	AM Oscillation
T101	1-423-049-XX	Input Transformer
T201	1-404-062-00	VIFT
T202	1-403-360-00	SIFT-1
T203	1-425-940-00	SIFT-2
T401	1-442-757-00	Heater, HT
T801	⚠1-453-076-00	Flyback, FBT; including anode cap
T901	⚠1-442-767-22	Power, PT

CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted. 50WV or less are not indicated except for electrolytics. pF = μμF, elect = electrolytic

Ref. No.	*Part No.*	*Description*		
C2	1-101-922-11	0.0047		
C3	1-101-919-11	0.0022		
C4	1-102-958-11	20p		
C5	1-101-923-11	0.01		
C6	1-121-419-11	220	6.3V	elect
C7,8	1-101-922-11	0.0047		
C9	1-102-505-11	6p		
C10	1-102-865-11	8p		
C11	1-102-521-11	43p		
C12	1-101-972-11	18p		
C13	1-103-746-11	8p		
C14	1-127-019-11	0.1	16V	solid aluminum
C15	1-101-576-11	1.5p		
C16	1-101-924-11	0.022		
C17	1-101-923-11	0.01		
C18	1-101-924-11	0.022		
C19	1-101-923-11	0.01		
C20	1-101-924-11	0.022		
C21	1-101-923-11	0.01		
C22	1-121-419-11	220	6.3V	elect
C23	1-101-923-11	0.01		
C25	1-127-019-11	0.1	16V	solid aluminum
C26	1-121-651-11	10	16V	elect
C27,28	1-107-093-11	220p		mica
C29	1-101-923-11	0.01		
C30	1-108-583-11	0.015		mylar
C31,32	1-108-239-11	0.01		mylar
C33	1-101-923-11	0.01		
C34	1-121-409-11	47	16V	elect
C35,37	1-101-923-11	0.01		
C38	1-102-742-11	2p		
C39	1-102-743-11	3p		
C40	1-101-924-11	0.022		
C41	1-108-239-11	0.01		mylar
C42	1-101-924-11	0.022		
C43	1-121-651-11	10	16V	elect
C44	1-101-924-11	0.022		
C45	1-121-413-11	100	6.3V	elect
C46	1-101-923-11	0.01		
C101	1-121-726-11	0.47	50V	elect
C102	1-121-415-11	100	16V	elect
C103	1-108-228-11	0.0015		mylar
C104	1-121-726-11	0.47	50V	elect
C105	1-101-918-11	0.001		
C106	1-121-726-11	0.47	50V	elect
C107	1-102-973-11	100p		
C108	1-121-726-11	0.47	50V	elect
C109	1-102-973-11	100p		
C110	1-108-579-11	0.01		mylar
C111	1-108-228-11	0.0015		mylar
C112	1-108-844-11	0.039		mylar
C113,114	1-102-973-11	100p		
C115	1-121-415-11	100	16V	elect
C116	1-121-409-11	47	16V	elect
C117	1-121-479-11	22	16V	elect
C118	1-102-973-11	100p		
C119	1-121-419-11	220	6.3V	elect
C120,121	1-121-651-11	10	16V	elect
C122	1-121-392-11	3.3	25V	elect
C123	1-121-651-11	10	16V	elect
C124,125	1-121-426-11	470	16V	elect
C126	1-121-651-11	10	16V	elect
C128	1-102-973-11	100p		
C129,130	1-101-918-11	0.001		

Ref. No.	*Part No.*	*Description*		
C200	1-101-969-11	5p		
C201-206	1-102-121-11	0.0022		
C207	1-101-361-11	150p		
C208,209	1-102-121-11	0.0022		
C210	1-102-978-11	220p		
C211	1-102-976-11	180p		
C212,213	1-102-947-11	10p		
C214	1-102-820-11	330p		
C215	1-101-001-11	0.001		
C216	1-108-628-11	0.015	100V	mylar
C217	1-121-726-11	0.47	50V	elect
C218,219	1-121-651-11	10	16V	elect
C220	1-102-809-11	7p		
C221,222	1-101-004-11	0.01		
C223	1-102-658-11	180p		
C224	1-121-651-11	10	16V	elect
C225	1-101-003-11	0.0047		
C226	1-121-479-11	22	16V	elect
C227	1-101-004-11	0.01		
C228	1-101-003-11	0.0047		
C229	1-121-420-11	220	10V	elect
C230,231	1-102-121-11	0.0022		
C233,234	1-121-651-11	10	16V	elect
C235	1-102-946-11	9p		
C236	1-102-809-11	7p		
C237	1-101-004-11	0.01		
C238,239	1-102-115-11	560p		
C240	1-121-651-11	10	16V	elect
C242	1-102-116-11	680p		
C402	1-121-450-11	2.2	50V	elect
C403	1-102-820-11	330p		
C404	1-102-123-11	0.0033		
C405	1-101-004-11	0.01		
C406	1-108-638-11	0.1	100V	mylar
C451	1-108-835-11	0.0068		mylar
C452	1-121-726-11	0.47	50V	elect
C453	1-121-392-11	3.3	25V	elect
C454	1-121-414-11	100	10V	elect
C455	1-121-651-11	10	16V	elect
C456	1-121-402-11	33	10V	elect
C457	1-121-415-11	100	16V	elect
C458,459	1-101-004-11	0.01		
C460	1-101-001-11	0.001		
C461	1-121-736-11	1000	10V	elect

Ref. No.	*Part No.*	*Description*		
C462	1-121-409-11	47	16V	elect
C463	1-121-391-11	1	50V	elect
C464	1-101-001-11	0.001		
C501	1-108-632-11	0.033	100V	mylar
C502	1-121-391-11	1	50V	elect
C503	1-108-624-11	0.0068	100V	mylar
C504	1-108-622-11	0.0047	100V	mylar
C505	1-108-628-11	0.015	100V	mylar
C506	1-121-392-11	3.3	25V	elect
C507	1-108-638-11	0.1	100V	mylar
C508	1-108-628-11	0.015	100V	mylar
C509	1-108-638-11	0.1	100V	mylar
C510	1-121-352-11	47	10V	mylar
C511	1-121-391-11	1	50V	elect
C512	1-102-820-11	330p		
C551	1-108-632-11	0.033	100V	mylar
C552	1-108-634-11	0.047	100V	mylar
C553	1-108-628-11	0.015	100V	mylar
C554	1-108-632-11	0.033	100V	mylar
C555	1-108-634-11	0.047	100V	mylar
C556	1-131-199-11	10	16V	tantalum
C557,558	1-121-402-11	33	10V	elect
C559	1-121-395-11	4.7	25V	elect
C560,561	1-121-425-11	470	10V	elect
C563	1-101-005-11	0.022		
C601	1-101-439-11	680p		
C651,652	1-101-003-11	0.0047		
C653	1-121-660-11	2200	16V	elect
C654	1-101-004-11	0.01		
C801	1-121-391-11	1	50V	elect
※C802	1-108-614-11	0.001	100V	mylar
	1-108-618-11	0.0022		
	1-108-620-11	0.0033		
	1-108-622-11	0.0047		
C803	1-108-628-11	0.015	100V	mylar
C804	1-121-421-11	220	16V	elect
C805	1-129-733-11	0.01	630V	polyethylene
C806	1-121-152-11	22	50V	elect
C901,902	1-102-074-11	0.001		
CT1-1-4 CV1-1-4	1-151-215-XX	Capacitor, tuning		

※ : selected to yield optimum performance

Ref. No.	*Part No.*	*Description*

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on page 30 for their part numbers.
All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
kΩ = 1000Ω, MΩ = 1000kΩ

Ref. No.	*Part No.*	*Description*
R141	1-213-134-11	180 1W metal oxide (nonflammable)
R467,468	1-207-459-11	0.47 ½W wirewound
R901	1-205-543-11	6.2 20W cement coated
RV401	1-224-910-00	1k, variable; CONTRAST
RV402	1-224-899-00	250k, variable; BRIGHT
RV451	1-224-904-00	20k, variable; TONE
RV452	1-224-905-00	20k-C, variable; VOLUME
RV551	1-224-898-00	100k, variable; V. HOLD
RV552	1-224-645-XX	10k, adjustable; V. SIZE ADJ
RV601	1-224-643-XX	2.2k, adjustable; 6V ADJ
RV801	1-224-647-XX	47k, adjustable; ch ADJ
RV901	1-224-896-00	100k, variable; TV TUNE

MISCELLANEOUS

Ref. No.	*Part No.*	*Description*
EH	8-825-566-00	Head, erase; EBF5-02B
F651	⚠ 1-532-454-XX	Fuse, 1.6A
J651/ S651	⚠ 1-509-769-00	Connector, 2p power; AC/DC
J901	1-507-251-XX	Jack, EXT ANT
J902	1-507-412-XX	Jack, mini; MIC
J903	1-507-412-XX	Jack, mini; EARPHONE
J904	1-507-559-00	Socket, DC IN 12V
ME	1-520-207-00	Meter, REC/BATT/TUNE
MIC	8-814-196-61	Microphone, C-1004P
PL1	1-518-115-XX	Lamp, pilot
RPH	8-829-336-06	Head, record/playback; PP134-36F
S101	1-516-367-XX	Switch, pushbutton; REC/PB
S1021-1-6	1-516-986-00	Switch, slide; POWER
S104	1-516-944-00	Switch, leaf; motor
S201-1-6	1-552-036-00	Switch, rotaly slide; TV SELECT
S451	1-516-521-00	Switch, slide; RADIO BAND
S651		included in J651
SP901	1-502-636-00	Speaker
	1-401-435-XX	Antenna, ferrite-rod
	1-501-178-00	Antenna, telescopic; included in main chassis ass'y
	1-526-148-41	Socket, picture tube
	1-548-091-XX	Counter, tape
	8-834-009-10	Motor, DNM-1200A
	⚠ 8-731-300-75	Picture Tube, CT-527

PACKING MATERIALS AND ACCESSORIES

Part No.	*Description*
X-3701-105-0	Head Cleaning Tips Ass'y
1-504-059-00	Earphone (ME-20H)
1-506-309-00	Shorting Plug (SP-100)
1-528-022-21	Battery, size "D" (IEC designation R20)
⚠ 1-551-002-00	Cord, power
3-701-363-00	Label, tack
3-701-625-00	Bag, polyethylene
3-793-828-11	Card, coution
4-022-637-00	TV Hood
4-022-645-00	Sheet, protection
4-022-647-00	Cushion, upper
4-022-648-00	Cushion, lower
4-022-652-00	Shoulder Strap
4-022-660-00	Carton
4-495-674-51	Manual, instruction
8-890-205-00	Cassette Tape (C-30)

Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

Sony Corporation
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TV-FM/AM RECEIVER CASSETTE-CORDER

FX-310UW

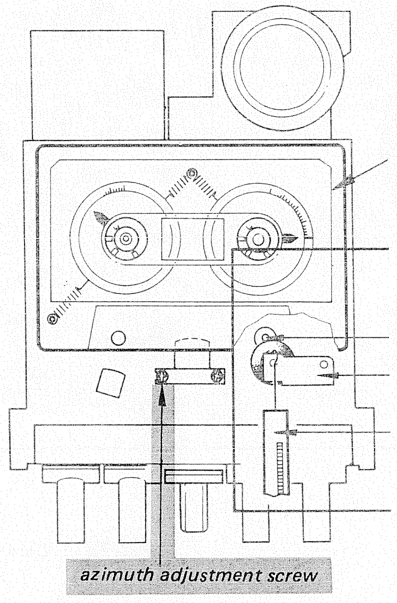
No. 1
May, 1978

CORRECTION

Correct the service manual as shown below

▨ : **Corrected portion**

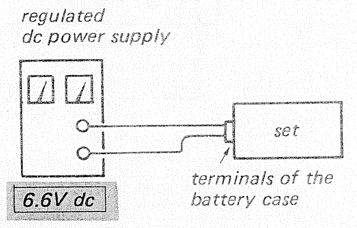
Page 10: Record/playback Head Azimuth Adjustment


azimuth adjustment screw

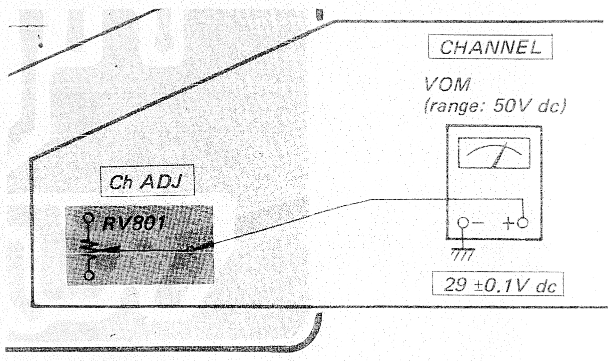
Page 13: Battery Meter Calibration

Procedure:

Mode: playback


regulated
dc power supply
set
terminals of the battery case
6.6V dc

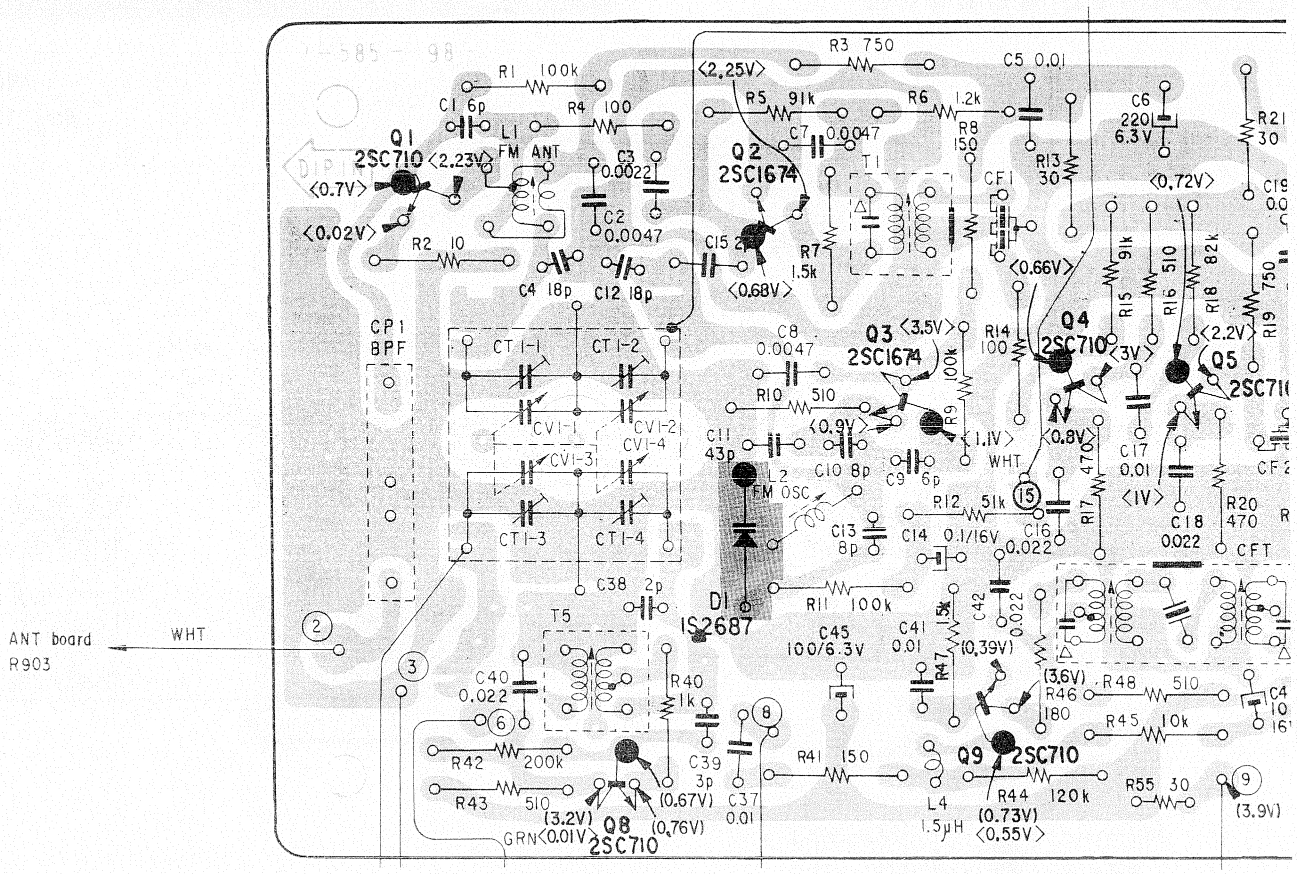
Page 16: CHANNEL Adjustment


CHANNEL
VOM
(range: 50V dc)
Ch ADJ
RV801
29 ±0.1V dc

SONY
SERVICE MANUAL

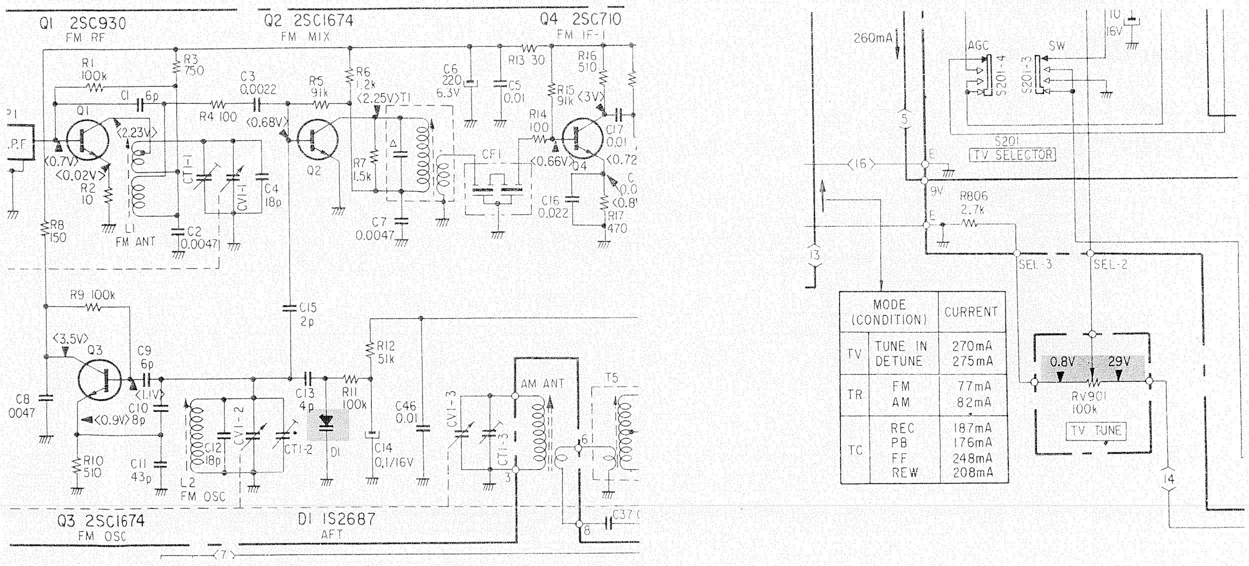
Page 21: MOUNTING DIAGRAM
—RADIO Board—

▨ : Corrected portion


R1 100k
C1 6p
R4 100
L1 FM ANT
C3 0.0022
C2 0.0047
Q1 2SC710
<2.23V>
<0.7V>
<0.02V>
R2 10
C4 18p
C12 18p
R3 750
<2.25V>
R5 91k
R6 1.2k
C5 0.01
C7 0.0047
R8 150
Q2 2SC1674
T1
CF1
R13 30
C6 220 6.3V
R21 30
C15 2p
R7 1.5k
<0.68V>
<0.66V>
<0.72V>
R15 91k
R16 510
R18 82k
R19 750
CP1 BPF
CT1-1
CT1-2
CV1-1
CV1-2
CV1-3
CV1-4
CT1-3
CT1-4
C8 0.0047
Q3 2SC1674
<3.5V>
R14 100
Q4 2SC710
<3V>
<2.2V>
Q5 2SC710
R10 510
<0.9V>
R9 100k
<1.1V>
<0.8V>
C11 43p
C10 8p
C9 6p
WHT
15
C17 0.01
CF2
L2 FM OSC
C13 8p
C14 0.1/16V
R12 51k
C16 0.022
R17 470
<1V>
C18 0.022
R20 470
CFT
C38 2p
D1 1S2687
R11 100k
T5
C45 100/6.3V
C41 0.01
R47 1.5k
C42 0.022
(0.39V)
ANT board R903
WHT
2
3
C40 0.022
6
R40 1k
8
(3.6V)
R46 180
R48 510
C4 10 16V
R45 10k
R42 200k
R43 510
C39 3p
C37 0.01
R41 150
Q9 2SC710
L4 1.5μH
R44 120k
(0.73V)
<0.55V>
R55 30
9
(3.9V)
(3.2V)
GRN<0.01V>
Q8 2SC710
(0.67V)
(0.76V)

Page 28: SCHEMATIC DIAGRAM

▨ : Corrected portion


Q1 2SC930 FM RF
Q2 2SC1674 FM MIX
Q4 2SC710 FM IF-1
R1 100k
R3 750
C1 6p
C3 0.0022
R4 100
R5 91k
R6 1.2k
<2.25V>
T1
C6 220 6.3V
C5 0.01
R13 30
R16 510
R15 91k
<3V>
R14 100
C17 0.01
<0.72
<2.23V>
<0.68V>
<0.7V>
<0.02V>
R2 10
CT1-1
CV1-1
C4 18p
L1 FM ANT
C2 0.0047
R8 150
R7 1.5k
CF1
<0.66V>
C16 0.022
<0.8
R17 470
C7 0.0047
R9 100k
<3.5V>
Q3
C9 6p
C8 0047
<1.1V>
C10 8p
<0.9V>
R10 510
C11 43p
C15 2p
R12 51k
C13 4p
R11 100k
CV1-2
C12 18p
CT1-2
D1
C14 0.1/16V
C46 0.01
CV1-3
AM ANT
CT1-3
T5
L2 FM OSC
Q3 2SC1674 FM OSC
D1 1S2687 AFT
C37
7
260mA
AGC
SW
S201-4
S201-3
S201 TV SELECTOR
16
9V
E
R806 2.7k
13
SEL-3
SEL-2
0.8V
29V
RV901 100k
TV TUNE
14
5

MODE (CONDITION)		CURRENT
TV	TUNE IN	270mA
	DETUNE	275mA
TR	FM	77mA
	AM	82mA
TC	REC	187mA
	PB	176mA
	FF	248mA
	REW	208mA

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